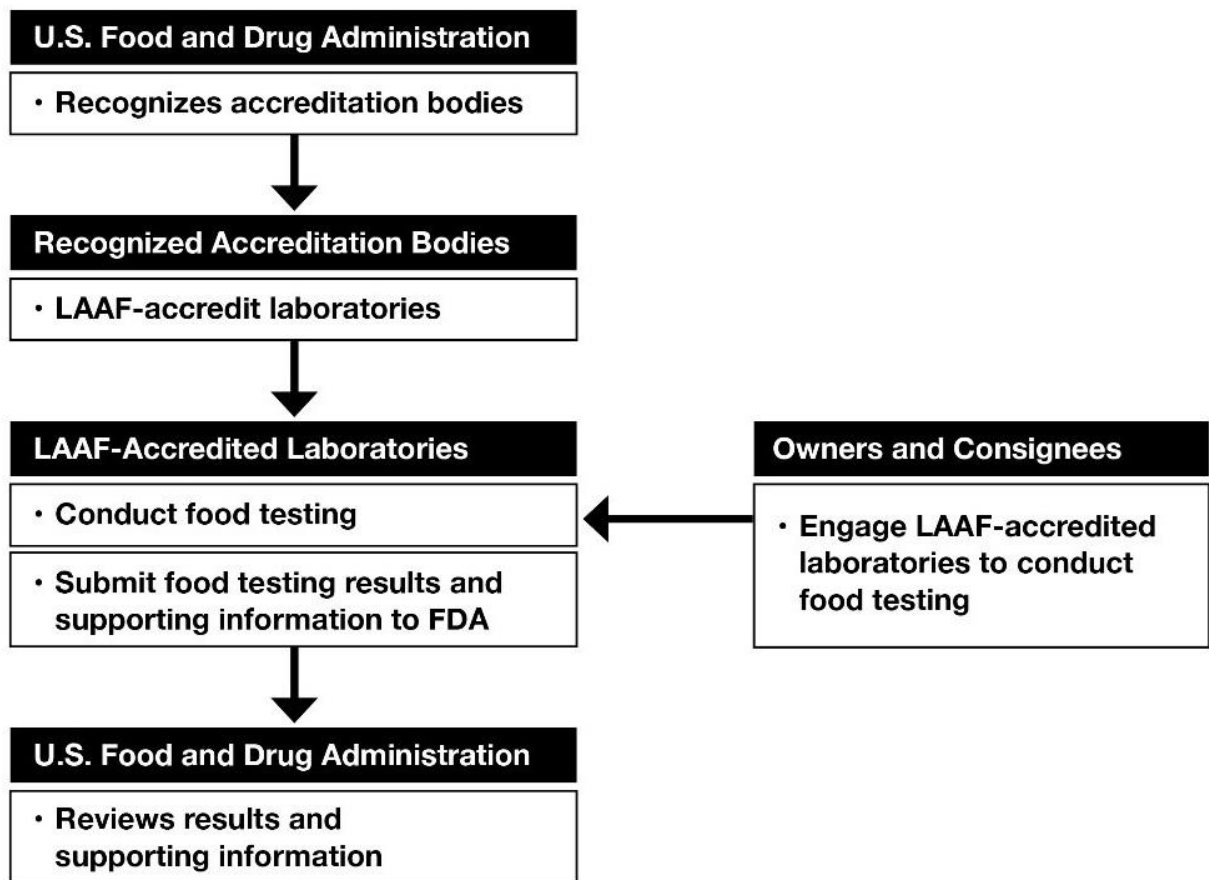# Small Entity Compliance Guide: Laboratory Accreditation for Analyses of Foods - What You Need to Know

The FDA Food Safety Modernization Act (FSMA) directs the Food and Drug Administration (FDA) as the food regulatory agency of the U.S. Department of Health and Human Services to better protect public health by, among other things, adopting a modern, preventive, and risk-based approach to food safety regulation. Section 202(a) of FSMA created section 422 of the Federal Food, Drug, and Cosmetic (FD&C) Act, which directs FDA to establish a laboratory accreditation program for the analyses of foods in certain circumstances. More specifically, section 422 of the FD&C Act directs FDA to recognize accreditation bodies that will accredit laboratories to standards established by the Agency. FDA is to maintain a list of accreditation bodies and laboratories participating in the program. In certain circumstances related to food safety and as described in section 422 of the FD&C Act, testing may only be conducted by a laboratory participating in the program. Section 422 of the FD&C Act further provides that the results of tests conducted under the program must generally be sent by the participating laboratory directly to FDA.

On December 3, 2021, FDA issued a final rule, "Laboratory Accreditation for Analyses of Food" (86 FR 68728) (the LAAF rule or the rule) to implement section 422 of the FD&C Act. The LAAF rule establishes the Laboratory Accreditation for Analyses of Foods (LAAF) program through regulations at 21 CFR part 1, subpart R (1.1101 through 1.1201). The regulations describe applicable requirements and processes by which accreditation bodies and laboratories may participate in the LAAF program, how FDA will oversee those entities and manage the program, and which food safety-related testing must be conducted by a participating laboratory.

The structure of the LAAF program is illustrated by the following diagram:

Structure of the Laboratory Accreditation for Analyses of Foods (LAAF) Program

U.S. Food and Drug Administration
- Recognizes accreditation bodies

↓

Recognized Accreditation Bodies
- LAAF-accredit laboratories

↓

LAAF-Accredited Laboratories
- Conduct food testing
- Submit food testing results and supporting information to FDA

Owners and Consignees
- Engage LAAF-accredited laboratories to conduct food testing

↓

U.S. Food and Drug Administration
- Reviews results and supporting information

Implementation of the LAAF program will occur in a stepwise fashion. Once FDA has recognized a sufficient number of accreditation bodies, the Agency will announce that laboratories may apply to the recognized accreditation bodies for LAAF-accreditation. When there is sufficient LAAF-accredited laboratory capacity for a category of food testing covered by the rule, we will publish a document in the Federal Register giving owners and consignees six months' notice that they will be required to use a LAAF-accredited laboratory for such food testing.

We have prepared this Small Entity Compliance Guide (SECG) in accordance with section 212 of the Small Business Regulatory Enforcement Fairness Act (Public Law 104-121, as amended by Public Law 110-28). This guidance document is intended to help small entities participate in or comply with the LAAF rule. The regulations are binding and have the full force and effect of law.

FDA's guidance documents, including this guidance, do not establish legally enforceable responsibilities. Instead, guidances describe our current thinking on a topic and should be viewed only as recommendations, unless specific regulatory or statutory requirements are cited. The use of the word *should* in FDA guidances means that something is suggested or recommended, but not required.

National standards: Food, clothing and other items

Disclaimer: *IRS Collection Financial Standards are intended for use in calculating repayment of delinquent taxes. These Standards are effective on April 21, 2025 for purposes of federal tax administration only. Expense information for use in bankruptcy calculations can be found on the website for the* U.S. Trustee Program.

Download the national standards for food, clothing and other items **PDF** in PDF format for printing. Please note that the standard amounts change, so if you elect to print them, check back periodically to assure you have the latest version.

National Standards have been established for five necessary expenses: food, housekeeping supplies, apparel and services, personal care products and services, and miscellaneous.

The standards are derived from the Bureau of Labor Statistics (BLS) Consumer Expenditure Survey (CES) and defined as follows:

Food includes food at home and food away from home. Food at home refers to the total expenditures for food from grocery stores or other food stores. It excludes the purchase of nonfood items. Food away from home includes all meals and snacks, including tips, at fast-food, take-out, delivery and full-service restaurants, etc.

Housekeeping supplies includes laundry and cleaning supplies, stationery supplies, postage, delivery services, miscellaneous household products, and lawn and garden supplies.

Apparel and services includes clothing, footwear, material, patterns and notions for making clothes, alterations and repairs, clothing rental, clothing

storage, dry cleaning and sent-out laundry, watches, jewelry and repairs to watches and jewelry.

Personal care products and services includes products for the hair, oral hygiene products, shaving needs, cosmetics and bath products, electric personal care appliances, and other personal care products.

The miscellaneous allowance is for expenses taxpayers may incur that are not included in any other allowable living expense items, or for any portion of expenses that exceed the Collection Financial Standards and are not allowed under a deviation. Taxpayers can use the miscellaneous allowance to pay for expenses that exceed the standards, or for other expenses such as credit card payments, bank fees and charges, reading material and school supplies.

Taxpayers are allowed the total National Standards amount monthly for their family size, without questioning the amounts they actually spend. If the amount claimed is more than the total allowed by the National Standards for food, housekeeping supplies, apparel and services, and personal care products and services, the taxpayer must provide documentation to substantiate those expenses are necessary living expenses. Deviations from the standard amount are not allowed for miscellaneous expenses. Generally, the total number of persons allowed for National Standards should be the same as those allowed as dependents on the taxpayer's most recent year income tax return.

Expense	One Person	Two Persons	Three Persons	Four Persons
Food	$497	$863	$1,068	$1,255
Housekeeping supplies	$45	$75	$82	$91

Expense	One Person	Two Persons	Three Persons	Four Persons
Apparel & services	$93	$181	$188	$276
Personal care products & services	$50	$91	$94	$117
Miscellaneous	$154	$271	$321	$390
Total	$839	$1,481	$1,753	$2,129

More than four persons	Additional Persons Amount
For each additional person, add to four-person total allowance:	$394

Publication 15-B (2025), Employer's Tax Guide to Fringe Benefits

Cents-per-mile rule. The business mileage rate for 2025 is 70 cents per mile. You may use this rate to reimburse an employee for business use of a personal vehicle, and under certain conditions, you may use the rate under the cents-per-mile rule to value the personal use of a vehicle you provide to an employee. See *Cents-Per-Mile Rule* in section 3.

Qualified parking exclusion and commuter transportation benefit. For 2025, the monthly exclusion for qualified parking is $325 and the monthly

exclusion for commuter highway vehicle transportation and transit passes is $325. See *Qualified Transportation Benefits* in section 2.

Contribution limit on a health flexible spending arrangement (FSA). For plan years beginning in 2025, a cafeteria plan may not allow an employee to request salary reduction contributions for a health FSA in excess of $3,300.

Reminders

Moving expense reimbursements. P.L. 115-97, Tax Cuts and Jobs Act, suspends the exclusion for qualified moving expense reimbursements from your employee's income for tax years beginning after 2017 and before 2026. However, the exclusion is still available in the case of a member of the U.S. Armed Forces on active duty who moves because of a permanent change of station due to a military order. The exclusion applies only to reimbursement of moving expenses that the member could deduct if they had paid or incurred them without reimbursement. See *Moving Expenses* in Pub. 3, Armed Forces' Tax Guide, for the definition of what constitutes a permanent change of station and to learn which moving expenses are deductible.

Bicycle commuting reimbursements. P.L. 115-97 suspends the exclusion of qualified bicycle commuting reimbursements from your employee's income for tax years beginning after 2017 and before 2026. See *Transportation (Commuting) Benefits* in section 2.

Withholding on supplemental wages. P.L. 115-97 lowered the federal income tax withholding rates on supplemental wages for tax years beginning after 2017 and before 2026. See *Withholding and depositing taxes* in section 4 for the withholding rates.

Form 1099-NEC, Nonemployee Compensation. Use Form 1099-NEC to report nonemployee compensation paid in 2024. The 2024 Form 1099-NEC is due January 31, 2025.

Additional permitted election changes for health coverage under a cafeteria plan. Notice 2014-55, 2014-41 I.R.B. 672, available

at IRS.gov/irb/2014-41_IRB#NOT-2014-55, expands the application of the permitted change rules for health coverage under a cafeteria plan and discusses two specific situations in which a cafeteria plan participant is permitted to revoke their election under a cafeteria plan during a period of coverage.

Definition of marriage. A marriage of two individuals is recognized for federal tax purposes if the marriage is recognized by the state or territory of the United States in which the marriage is entered into, regardless of legal residence. Two individuals who enter into a relationship that is denominated as a marriage under the laws of a foreign jurisdiction are recognized as married for federal tax purposes if the relationship would be recognized as a marriage under the laws of at least one state or territory of the United States, regardless of legal residence. Individuals who have entered into a registered domestic partnership, civil union, or other similar relationship that isn't denominated as a marriage under the law of the state or territory of the United States where such relationship was entered into aren't lawfully married for federal tax purposes, regardless of legal residence. Notice 2014-1 discusses how certain rules for cafeteria plans, including health and dependent care FSAs, and health savings accounts (HSAs) apply to same-sex spouses participating in employee benefit plans. Notice 2014-1, 2014-2 I.R.B. 270, is available at IRS.gov/irb/2014-02_IRB#NOT-2014-1.

Getting tax forms, instructions, and publications. Go to IRS.gov/Forms to download current and prior-year forms, instructions, and publications.

Ordering tax forms, instructions, and publications. Go to IRS.gov/OrderForms to order current forms, instructions, and publications; call 800-829-3676 to order prior-year forms and instructions. The IRS will process your order as soon as possible. **Don't** resubmit requests you've already sent us. You can get forms, instructions, and publications faster online.

Getting answers to your tax questions. If you have a tax question not answered by this publication, check IRS.gov and *How To Get Tax Help* at the end of this publication.

Photographs of missing children. The IRS is a proud partner with the National Center for Missing & Exploited Children® (NCMEC). Photographs of missing children selected by the Center may appear in this publication on pages that would otherwise be blank. You can help bring these children home by looking at the photographs and calling 1-800-THE-LOST (1-800-843-5678) if you recognize a child.

Introduction

This publication supplements Pub. 15, Employer's Tax Guide, and Pub. 15-A, Employer's Supplemental Tax Guide. It contains information for employers on the employment tax treatment of fringe benefits.

Comments and suggestions.

We welcome your comments about this publication and your suggestions for future editions.

You can send us comments through IRS.gov/FormComments.

Or you can write to:

Internal Revenue Service
Tax Forms and Publications
1111 Constitution Ave. NW, IR-6526
Washington, DC 20224

Although we can't respond individually to each comment received, we do appreciate your feedback and will consider your comments and suggestions as we revise our tax forms, instructions, and publications. **Don't** send tax questions, tax returns, or payments to this address.

Publication 15-B - Main Contents

1. Fringe Benefit Overview

A fringe benefit is a form of pay for the performance of services. For example, you provide an employee with a fringe benefit when you allow the employee to use a business vehicle to commute to and from work.

Performance of services.

A person who performs services for you doesn't have to be your employee. A person may perform services for you as an independent contractor, partner, or director. Also, for fringe benefit purposes, treat a person who agrees not to perform services (such as under a covenant not to compete) as performing services.

Provider of benefit.

You're the provider of a fringe benefit if it is provided for services performed for you. You're considered the provider of a fringe benefit even if a third party, such as your client or customer, provides the benefit to your employee for services the employee performs for you. For example, if, in exchange for goods or services, your customer provides daycare services as a fringe benefit to your employees for services they provide for you as their employer, then you're the provider of this fringe benefit even though the customer is actually providing the daycare.

Recipient of benefit.

The person who performs services for you is considered the recipient of a fringe benefit provided for those services. That person may be considered the recipient even if the benefit is provided to someone who didn't perform services for you. For example, your employee may be the recipient of a fringe benefit you provide to a member of the employee's family.

Are Fringe Benefits Taxable?

Any fringe benefit you provide is taxable and must be included in the recipient's pay unless the law specifically excludes it. Section 2 discusses the exclusions that apply to certain fringe benefits. Any benefit not excluded under the rules discussed in section 2 is taxable.

Including taxable benefits in pay.

You must include in a recipient's pay the amount by which the value of a fringe benefit is more than the sum of the following amounts.

- Any amount the law excludes from pay.

- Any amount the recipient paid for the benefit.

The rules used to determine the value of a fringe benefit are discussed in section 3.

If the recipient of a taxable fringe benefit is your employee, the benefit is generally subject to employment taxes and must be reported on Form W-2, Wage and Tax Statement. However, you can use special rules to withhold, deposit, and report the employment taxes. These rules are discussed in section 4.

If the recipient of a taxable fringe benefit isn't your employee, the benefit isn't subject to employment taxes. However, you may have to report the benefit on one of the following information returns.

IF the recipient receives the benefit as...	THEN use...
an independent contractor	Form 1099-NEC.
a partner	Schedule K-1 (Form 1065), Partner's Share of Income, Deductions, Credits, etc.

For more information, see the instructions for the forms listed above.

Cafeteria Plans

A cafeteria plan, including an FSA, provides participants an opportunity to receive qualified benefits on a pre-tax basis. It is a written plan that allows your employees to choose between receiving cash or taxable benefits, instead of certain qualified benefits for which the law provides an exclusion from wages. If an employee chooses to receive a qualified benefit under the plan, the fact that the employee could have received cash or a taxable benefit instead won't make the qualified benefit taxable.

Generally, a cafeteria plan doesn't include any plan that offers a benefit that defers pay. However, a cafeteria plan can include a qualified 401(k) plan as a benefit. Also, certain life insurance plans maintained by educational institutions can be offered as a benefit even though they defer pay.

Qualified benefits.

A cafeteria plan can include the following benefits discussed in section 2.

- Accident and health benefits (but not Archer medical savings accounts (Archer MSAs) or long-term care insurance).

- Adoption assistance.

- Dependent care assistance.

- Group-term life insurance coverage (including costs that can't be excluded from wages).

- HSAs. Distributions from an HSA may be used to pay eligible long-term care insurance premiums or to pay for qualified long-term care services.

Benefits not allowed.

A cafeteria plan can't include the following benefits discussed in section 2.

- Archer MSAs. See *Accident and Health Benefits* in section 2.

- Athletic facilities.

- De minimis (minimal) benefits.

- Educational assistance.

- Employee discounts.

- Employer-provided cell phones.

- Lodging on your business premises.

- Meals.

- No-additional-cost services.

- Retirement planning services.

- Transportation (commuting) benefits.

- Tuition reduction.

- Working condition benefits.

It also can't include scholarships or fellowships (discussed in Pub. 970).

Contribution limit on a health FSA.

For plan years beginning in 2025, a cafeteria plan may not allow an employee to request salary reduction contributions for a health FSA in excess of $3,300.

A cafeteria plan that doesn't limit health FSA contributions to the dollar limit isn't a cafeteria plan and all benefits offered under the plan are includible in the employee's gross income.

For more information, see Notice 2012-40, 2012-26 I.R.B. 1046, available at IRS.gov/irb/2012-26_IRB#NOT-2012-40.

"Use-or-lose" rule for health FSAs.

Instead of a grace period, you may, at your option, amend your cafeteria plan to allow an employee's unused contributions to carry over to the

immediately following plan year. For more information, see Notice 2013-71, 2013-47 I.R.B. 532, available at IRS.gov/irb/2013-47_IRB#NOT-2013-71; and Notice 2020-33, 2020-22 I.R.B. 868, available at IRS.gov/irb/2020-22_IRB#NOT-2020-33.

Employee.

For these plans, treat the following individuals as employees.

- A current common-law employee. See section 2 in Pub. 15.

- A full-time life insurance agent who is a current statutory employee.

- A leased employee who has provided services to you on a substantially full-time basis for at least a year if the services are performed under your primary direction or control.

Exception for S corporation shareholders.

Don't treat a 2% shareholder of an S corporation as an employee of the corporation for this purpose. A 2% shareholder for this purpose is someone who directly or indirectly owns (for any day during the tax year) more than 2% of the corporation's stock or stock with more than 2% of the voting power. Treat a 2% shareholder as you would a partner in a partnership for fringe benefit purposes, but don't treat the benefit as a reduction in distributions to the 2% shareholder. For more information, see Revenue Ruling 91-26, 1991-1 C.B. 184.

Plans that favor highly compensated employees.

If your plan favors highly compensated employees as to eligibility to participate, contributions, or benefits, you must include in their wages the value of taxable benefits they could have selected. A plan you maintain under a collective bargaining agreement doesn't favor highly compensated employees.

A highly compensated employee for this purpose is any of the following employees.

1. An officer.

2. A shareholder who owns more than 5% of the voting power or value of all classes of the employer's stock.

3. An employee who is highly compensated based on the facts and circumstances.

4. A spouse or dependent of a person described in (1), (2), or (3).

Plans that favor key employees.

If your plan favors key employees, you must include in their wages the value of taxable benefits they could have selected. A plan favors key employees if more than 25% of the total of the nontaxable benefits you provide for all employees under the plan go to key employees. However, a plan you maintain under a collective bargaining agreement doesn't favor key employees.

A key employee during 2025 is generally an employee who is either of the following.

1. An officer having annual pay of more than $230,000.

2. An employee who for 2025 is either of the following.

   a. A 5% owner of your business.

   b. A 1% owner of your business whose annual pay is more than $150,000.

Simple Cafeteria Plans for Small Businesses

Eligible employers meeting contribution requirements and eligibility and participation requirements can establish a simple cafeteria plan. Simple cafeteria plans are treated as meeting the nondiscrimination requirements of a cafeteria plan and certain benefits under a cafeteria plan.

Eligible employer.

You're an eligible employer if you employed an average of 100 or fewer employees during either of the 2 preceding years. If your business wasn't in existence throughout the preceding year, you're eligible if you reasonably expect to employ an average of 100 or fewer employees in the current year. If you establish a simple cafeteria plan in a year that you employ an average of 100 or fewer employees, you're considered an eligible employer for any subsequent year until the year after you employ an average of 200 or more employees.

Eligibility and participation requirements.

These requirements are met if all employees who had at least 1,000 hours of service for the preceding plan year are eligible to participate and each employee eligible to participate in the plan may elect any benefit available under the plan. You may elect to exclude from the plan employees who:

1. Are under age 21 before the close of the plan year,

2. Have less than 1 year of service with you as of any day during the plan year,

3. Are covered under a collective bargaining agreement if there is evidence that the benefits covered under the cafeteria plan were the subject of good-faith bargaining, or

4. Are nonresident aliens working outside the United States whose income didn't come from a U.S. source.

Contribution requirements.

You must make a contribution to provide qualified benefits on behalf of each qualified employee in an amount equal to:

1. A uniform percentage (not less than 2%) of the employee's compensation for the plan year; or

2. An amount that is at least 6% of the employee's compensation for the plan year or twice the amount of the salary reduction contributions of each qualified employee, whichever is less.

If the contribution requirements are met using option (2), the rate of contribution to any salary reduction contribution of a highly compensated or key employee can't be greater than the rate of contribution to any other employee.

More information.

For more information about cafeteria plans, see section 125 of the Internal Revenue Code and its regulations.

2. Fringe Benefit Exclusion Rules

This section discusses the exclusion rules that apply to fringe benefits. These rules exclude all or part of the value of certain benefits from the recipient's pay.

In most cases, the excluded benefits aren't subject to federal income tax withholding, social security tax, Medicare tax, federal unemployment tax under the Federal Unemployment Tax Act (FUTA), or Railroad Retirement Tax Act (RRTA) taxes and aren't reported on Form W-2.

This section discusses the exclusion rules for the following fringe benefits.

- Accident and health benefits.

- Achievement awards.

- Adoption assistance.

- Athletic facilities.

- De minimis (minimal) benefits.

- Dependent care assistance.

- Educational assistance.

- Employee discounts.

- Employee stock options.

- Employer-provided cell phones.

- Group-term life insurance coverage.

- HSAs.

- Lodging on your business premises.

- Meals.

- No-additional-cost services.

- Retirement planning services.

- Transportation (commuting) benefits.

- Tuition reduction.

- Working condition benefits.

See Table 2-1 for an overview of the employment tax treatment of these benefits.

Table 2-1. Special Rules for Various Types of Fringe Benefits (For more information, see the full discussion in this section.)

Treatment Under Employment Taxes

Type of Fringe Benefit	Income Tax Withholding	Social Security and Medicare (including Additional Medicare Tax when wages are paid in excess of $200,000)[1]	Federal Unemployment (FUTA)
Accident and health benefits	Exempt (except 2% shareholder-employees of S corporations).	Exempt	Exempt
Achievement awards	Exempt[2] up to $1,600 for qualified plan awards ($400 for nonqualified awards).		
Adoption assistance	Exempt[2,3]	Taxable	Taxable
Athletic facilities	Exempt if substantially all use during the calendar year is by employees, their spouses, and their dependent children, and the facility is operated by the employer on premises owned or leased by the employer.		
De minimis (minimal) benefits	Exempt	Exempt	Exempt
Dependent care assistance	Exempt[3] up to certain limits, $5,000 ($2,500 for married employee filing separate return).		
Educational assistance	Exempt up to $5,250 of benefits each year. (See *Educational Assistance*, later in this section.)		

Treatment Under Employment Taxes

Type of Fringe Benefit	Income Tax Withholding	Social Security and Medicare (including Additional Medicare Tax when wages are paid in excess of $200,000)[1]	Federal Unemployment (FUTA)
Employee discounts	Exempt[3] up to certain limits. (See *Employee Discounts*, later in this section.)		
Employee stock options	See *Employee Stock Options*, later in this section.		
Employer-provided cell phones	Exempt if provided primarily for noncompensatory business purposes.		
Group-term life insurance coverage	Exempt	Exempt[2,4,6] up to cost of $50,000 of coverage. (Special rules apply to former employees.)	Exempt
Health savings accounts (HSAs)	Exempt for qualified individuals up to the HSA contribution limits. (See *Health Savings Accounts*, later in this section.)		
Lodging on your business premises	Exempt[2] if furnished on your business premises, for your convenience, and as a condition of employment.		
Meals	Exempt[2] if furnished on your business premises for your convenience.		

Treatment Under Employment Taxes

Type of Fringe Benefit	Income Tax Withholding	Social Security and Medicare (including Additional Medicare Tax when wages are paid in excess of $200,000)[1]	Federal Unemployment (FUTA)
	Exempt if de minimis.		
No-additional-cost services	Exempt[3]	Exempt[3]	Exempt[3]
Retirement planning services	Exempt[5]	Exempt[5]	Exempt[5]
Transportation (commuting) benefits	Exempt[2] up to certain limits if for rides in a commuter highway vehicle and/or transit passes ($325) or qualified parking ($325). (See *Transportation (Commuting) Benefits*, later in this section.)		
	Exempt if de minimis.		
Tuition reduction	Exempt[3] if for undergraduate education (or graduate education if the employee performs teaching or research activities).		
Working condition benefits	Exempt	Exempt	Exempt
[1] Or other railroad retirement taxes, if applicable.			

Treatment Under Employment Taxes

Type of Fringe Benefit	Income Tax Withholding	Social Security and Medicare (including Additional Medicare Tax when wages are paid in excess of $200,000)[1]	Federal Unemployment (FUTA)

[2] Exemption doesn't apply to S corporation employees who are 2% shareholders.

[3] Exemption doesn't apply to certain highly compensated employees under a program that favors those employees.

[4] Exemption doesn't apply to certain key employees under a plan that favors those employees.

[5] Exemption doesn't apply to services for tax preparation, accounting, legal, or brokerage services.

[6] You must include in your employee's wages the cost of group-term life insurance beyond $50,000 worth of coverage, reduced by the amount the employee paid toward the insurance. Report it as wages in boxes 1, 3, and 5 of the employee's Form W-2. Also, show it in box 12 with code C. The amount is subject to social security and Medicare taxes, and you may, at your option, withhold federal income tax.

Accident and Health Benefits

This exclusion applies to contributions you make to an accident or health plan for an employee, including the following.

- Contributions to the cost of accident or health insurance including qualified long-term care insurance.

- Contributions to a separate trust or fund that directly or through insurance provides accident or health benefits.

- Contributions to Archer MSAs or HSAs (discussed in Pub. 969).

This exclusion also applies to payments you directly or indirectly make to an employee under an accident or health plan for employees that are either of the following.

- Payments or reimbursements of medical expenses.

- Payments for specific permanent injuries (such as the loss of the use of an arm or leg). The payments must be figured without regard to the period the employee is absent from work.

Accident or health plan.

This is an arrangement that provides benefits for your employees, their spouses, their dependents, and their children (under age 27 at the end of the tax year) in the event of personal injury or sickness. The plan may be insured or noninsured and doesn't need to be in writing.

Employee.

For this exclusion, treat the following individuals as employees.

- A current common-law employee.

- A full-time life insurance agent who is a current statutory employee.

- A retired employee.

- A former employee you maintain coverage for based on the employment relationship.

- A surviving spouse of an individual who died while an employee.

- A surviving spouse of a retired employee.

- For the exclusion of contributions to an accident or health plan, a leased employee who has provided services to you on a substantially full-time basis for at least a year if the services are performed under your primary direction or control.

Special rule for certain government plans.

For certain government accident and health plans, payments to a deceased employee's beneficiary may qualify for the exclusion from gross income if the other requirements for exclusion are met. See section 105(j) for details.

Exception for S corporation shareholders.

Don't treat a 2% shareholder of an S corporation as an employee of the corporation for this purpose. A 2% shareholder is someone who directly or indirectly owns (for any day during the tax year) more than 2% of the corporation's stock or stock with more than 2% of the voting power. Treat a 2% shareholder as you would a partner in a partnership for fringe benefit purposes, but don't treat the benefit as a reduction in distributions to the 2% shareholder. For more information, see Revenue Ruling 91-26, 1991-1 C.B. 184.

Exclusion from wages.

You can generally exclude the value of accident or health benefits you provide to an employee from the employee's wages.

Exception for certain long-term care benefits.

You can't exclude contributions to the cost of long-term care insurance from an employee's wages subject to federal income tax withholding if the coverage is provided through a flexible spending or similar arrangement. This is a benefit program that reimburses specified expenses up to a

maximum amount that is reasonably available to the employee and is less than five times the total cost of the insurance. However, you can exclude these contributions from the employee's wages subject to social security, Medicare, and FUTA taxes.

S corporation shareholders.

Because you can't treat a 2% shareholder of an S corporation as an employee for this exclusion, you must include the value of accident or health benefits you provide to the employee in the employee's wages subject to federal income tax withholding. However, you can exclude the value of these benefits (other than payments for specific injuries or illnesses not made under a plan set up to benefit all employees or certain groups of employees) from the employee's wages subject to social security, Medicare, and FUTA taxes. See Announcement 92-16 for more information. You can find Announcement 92-16 on page 53 of Internal Revenue Bulletin 1992-5.

Exception for highly compensated employees.

If your plan is a self-insured medical reimbursement plan that favors highly compensated employees, you must include all or part of the amounts you pay to these employees in box 1 of Form W-2. However, you can exclude these amounts (other than payments for specific injuries or illnesses not made under a plan set up to benefit all employees or certain groups of employees) from the employee's wages subject to income tax withholding and social security, Medicare, and FUTA taxes.

A self-insured plan is a plan that reimburses your employees for medical expenses not covered by an accident or health insurance policy.

A highly compensated employee for this exception is any of the following individuals.

- One of the five highest paid officers.

- An employee who owns (directly or indirectly) more than 10% in value of the employer's stock.

- An employee who is among the highest paid 25% of all employees (other than those who can be excluded from the plan).

For more information on this exception, see section 105(h) of the Internal Revenue Code and its regulations.

COBRA premiums.

The exclusion for accident and health benefits applies to amounts you pay to maintain medical coverage for a current or former employee under the Combined Omnibus Budget Reconciliation Act of 1986 (COBRA). The exclusion applies regardless of the length of employment, whether you directly pay the premiums or reimburse the former employee for premiums paid, and whether the employee's separation is permanent or temporary.

Qualified small employer health reimbursement arrangements (QSEHRAs).

QSEHRAs allow eligible small employers to pay or reimburse medical care expenses, including health insurance premiums, of eligible employees and their family members. A QSEHRA isn't a group health plan, and, therefore, isn't subject to group health plan requirements. Generally, payments from a QSEHRA to reimburse an eligible employee's medical expenses aren't includible in the employee's gross income if the employee has coverage that provides minimum essential coverage, as defined in section 5000A(f) of the Internal Revenue Code.

A QSEHRA is an arrangement that meets all the following requirements.

1. The arrangement is funded solely by you, and no salary reduction contributions may be made under the arrangement.

2. The arrangement provides, after the eligible employee provides proof of coverage, for the payment or reimbursement of the medical

expenses incurred by the employee or the employee's family members.

3. The amount of payments and reimbursements doesn't exceed $6,350 ($12,800, for family coverage) for 2025.

4. The arrangement is generally provided on the same terms to all your eligible employees. However, your QSEHRA may exclude employees who haven't completed 90 days of service, employees who haven't attained age 25 before the beginning of the plan year, part-time or seasonal employees, employees covered by a collective bargaining agreement if health benefits were the subject of good-faith bargaining, and employees who are nonresident aliens with no earned income from sources within the United States.

Eligible employer.

To be an eligible employer, you must not be an applicable large employer, which is defined as an employer that generally employed at least 50 full-time employees, including full-time equivalent employees, in the prior calendar year. You must also not offer a group health plan (including a health reimbursement arrangement (HRA) or a health FSA) to any of your employees. For more information about the Affordable Care Act and group health plan requirements, go to IRS.gov/ACA. For more information about QSEHRAs, including information about the requirement to give a written notice to each eligible employee, see Notice 2017-67, 2017-47 I.R.B. 517, available at IRS.gov/irb/2017-47_IRB#NOT-2017-67.

Reporting requirements.

You must report in box 12 of Form W-2 using code FF the amount of payments and reimbursements that your employee is entitled to receive from the QSEHRA for the calendar year without regard to the amount of payments or reimbursements actually received. For example, if your QSEHRA provides a permitted benefit of $3,000 and your employee

receives reimbursements of $2,000, on Form W-2, you would report a permitted benefit of $3,000 in box 12 using code FF.

Achievement Awards

This exclusion applies to the value of any tangible personal property you give to an employee as an award for either length of service or safety achievement. The exclusion doesn't apply to awards of cash, cash equivalents, gift cards, gift coupons, or gift certificates (other than arrangements granting only the right to select and receive tangible personal property from a limited assortment of items preselected or preapproved by you). The exclusion also doesn't apply to vacations, meals, lodging, tickets to theater or sporting events, stocks, bonds, other securities, and other similar items. An achievement award must meet all the following requirements.

- It is given to an employee for length of service or safety achievement.

- It is awarded as part of a meaningful presentation.

- It is awarded under conditions and circumstances that don't create a significant likelihood of disguised pay.

Employee.

For this exclusion, treat the following individuals as employees.

- A current employee.

- A former common-law employee you maintain coverage for in consideration of or based on an agreement relating to prior service as an employee.

- A leased employee who has provided services to you on a substantially full-time basis for at least a year if the services are performed under your primary direction or control.

Exception for S corporation shareholders.

Don't treat a 2% shareholder of an S corporation as an employee of the corporation for this purpose. A 2% shareholder is someone who directly or indirectly owns (for any day during the tax year) more than 2% of the corporation's stock or stock with more than 2% of the voting power. Treat a 2% shareholder as you would a partner in a partnership for fringe benefit purposes, but don't treat the benefit as a reduction in distributions to the 2% shareholder. For more information, see Revenue Ruling 91-26, 1991-1 C.B. 184.

Exclusion from wages.

You can generally exclude the value of achievement awards you give to an employee from the employee's wages if their cost isn't more than the amount you can deduct as a business expense for the year. The excludable annual amount is $1,600 ($400 for awards that aren't "qualified plan awards").

Deduction limit.

Your deduction for the cost of employee achievement awards given to any one employee during the tax year is limited to the following.

- $400 for awards that aren't qualified plan awards.

- $1,600 for all awards, whether or not qualified plan awards.

A qualified plan award is an achievement award given as part of an established written plan or program that doesn't favor highly compensated employees as to eligibility or benefits.

A highly compensated employee is an employee who meets either of the following tests.

1. The employee was a 5% owner at any time during the year or the preceding year.

2. The employee received more than $155,000 in pay for the preceding year.

You can choose to ignore test (2) if the employee wasn't also in the top 20% of employees when ranked by pay for the preceding year.

An award isn't a qualified plan award if the average cost of all the employee achievement awards given during the tax year (that would be qualified plan awards except for this limit) is more than $400. To figure this average cost, ignore awards of nominal value.

Deduct achievement awards, up to the maximum amounts listed earlier, as a nonwage business expense on your return or business schedule.

To determine for 2025 whether an achievement award is a "qualified plan award" under the deduction rules described under Deduction limit above, treat any employee who received more than $155,000 in pay for 2024 as a highly compensated employee..

If the cost of awards given to an employee is more than your allowable deduction, include in the employee's wages the larger of the following amounts.

- The part of the cost that is more than your allowable deduction (up to the value of the awards).

- The amount by which the value of the awards exceeds your allowable deduction.

Exclude the remaining value of the awards from the employee's wages.

Adoption Assistance

An adoption assistance program is a separate written plan of an employer that meets all of the following requirements.

1. It benefits employees who qualify under rules set up by you, which don't favor highly compensated employees or their dependents. To determine whether your plan meets this test, don't consider

employees excluded from your plan who are covered by a collective bargaining agreement if there is evidence that adoption assistance was a subject of good-faith bargaining.

2. It doesn't pay more than 5% of its payments during the year for shareholders or owners (or their spouses or dependents). A shareholder or owner is someone who owns (on any day of the tax year) more than 5% of the stock or of the capital or profits interest of your business.

3. You give reasonable notice of the plan to eligible employees.

4. Employees provide reasonable substantiation that payments or reimbursements are for qualifying expenses.

For this exclusion, a highly compensated employee for 2025 is an employee who meets either of the following tests.

1. The employee was a 5% owner at any time during the year or the preceding year.

2. The employee received more than $155,000 in pay for the preceding year.

You can choose to ignore test (2) if the employee wasn't also in the top 20% of employees when ranked by pay for the preceding year.

You must exclude all payments or reimbursements you make under an adoption assistance program for an employee's qualified adoption expenses from the employee's wages subject to federal income tax withholding. However, you can't exclude these payments from wages subject to social security, Medicare, and FUTA taxes.

You must report all qualifying adoption expenses you paid or reimbursed under your adoption assistance program for each employee for the year in box 12 of the employee's Form W-2. Report all amounts including those in excess of the $17,280 exclusion for 2025. Use code T to identify this amount.

Exception for S corporation shareholders.

For this exclusion, don't treat a 2% shareholder of an S corporation as an employee of the corporation. A 2% shareholder is someone who directly or indirectly owns (for any day during the tax year) more than 2% of the corporation's stock or stock with more than 2% of the voting power. Treat a 2% shareholder as you would a partner in a partnership for fringe benefit purposes, but don't treat the benefit as a reduction in distributions to the 2% shareholder. For more information, see Revenue Ruling 91-26, 1991-1 C.B. 184.

More information.

For more information on adoption benefits, see Notice 97-9, which is on page 35 of Internal Revenue Bulletin 1997-2 at IRS.gov/pub/irs-irbs/irb97-02.pdf. Advise your employees to see the Instructions for Form 8839.

Athletic Facilities

You can exclude the value of an employee's use of an on-premises gym or other athletic facility you operate from an employee's wages if substantially all use of the facility during the calendar year is by your employees, their spouses, and their dependent children. For this purpose, an employee's dependent child is a child or stepchild who is the employee's dependent or who, if both parents are deceased, hasn't attained the age of 25. The exclusion doesn't apply to any athletic facility if access to the facility is made available to the general public through the sale of memberships, the rental of the facility, or a similar arrangement.

On-premises facility.

The athletic facility must be located on premises you own or lease and must be operated by you. It doesn't have to be located on your business premises. However, the exclusion doesn't apply to an athletic facility that is a facility for residential use, such as athletic facilities that are part of a resort.

Employee.

For this exclusion, treat the following individuals as employees.

- A current employee.

- A former employee who retired or left on disability.

- A surviving spouse of an individual who died while an employee.

- A surviving spouse of a former employee who retired or left on disability.

- A leased employee who has provided services to you on a substantially full-time basis for at least a year if the services are performed under your primary direction or control.

- A partner who performs services for a partnership.

De Minimis (Minimal) Benefits

You can exclude the value of a de minimis benefit you provide to an employee from the employee's wages. A de minimis benefit is any property or service you provide to an employee that has so little value (taking into account how frequently you provide similar benefits to your employees) that accounting for it would be unreasonable or administratively impracticable. Cash and cash equivalent fringe benefits (for example, gift certificates, gift cards, and the use of a charge card or credit card), no matter how little, are never excludable as a de minimis benefit. However, meal money and local transportation fare, if provided on an occasional basis and because of overtime work, may be excluded, as discussed later.

Examples of de minimis benefits include the following.

- Personal use of an employer-provided cell phone provided primarily for noncompensatory business purposes. See *Employer-Provided Cell Phones*, later in this section, for details.

- Occasional personal use of a company copying machine if you sufficiently control its use so that at least 85% of its use is for business purposes.

- Holiday or birthday gifts, other than cash, with a low fair market value (FMV). Also, flowers or fruit or similar items provided to employees under special circumstances (for example, on account of illness, a family crisis, or outstanding performance).

- Group-term life insurance payable on the death of an employee's spouse or dependent if the face amount isn't more than $2,000.

- Certain meals. See *Meals*, later in this section, for details.

- Occasional parties or picnics for employees and their guests.

- Occasional tickets for theater or sporting events.

- Certain transportation fare. See *Transportation (Commuting) Benefits*, later in this section, for details.

Some examples of benefits that aren't excludable as de minimis fringe benefits are season tickets to sporting or theatrical events; the commuting use of an employer-provided automobile or other vehicle more than 1 day a month; membership in a private country club or athletic facility, regardless of the frequency with which the employee uses the facility; and use of employer-owned or -leased facilities (such as an apartment, hunting lodge, boat, etc.) for a weekend. If a benefit provided to an employee doesn't qualify as de minimis (for example, the frequency exceeds a limit described earlier), then generally the entire benefit must be included in income.

Employee.

For this exclusion, treat any recipient of a de minimis benefit as an employee.

Dependent Care Assistance

This exclusion applies to household and dependent care services you directly or indirectly pay for or provide to an employee under a written dependent care assistance program (DCAP) that covers only your employees. The services must be for a qualifying person's care and must be provided to allow the employee to work. These requirements are basically the same as the tests the employee would have to meet to claim the dependent care credit if the employee paid for the services. For more information, see *Can You Claim the Credit?* in Pub. 503.

Employee.

For this exclusion, treat the following individuals as employees.

- A current employee.

- A leased employee who has provided services to you on a substantially full-time basis for at least a year if the services are performed under your primary direction or control.

- Yourself (if you're a sole proprietor).

- A partner who performs services for a partnership.

Exclusion from wages.

You can exclude the value of benefits you provide to an employee under a DCAP from the employee's wages if you reasonably believe that the employee can exclude the benefits from gross income.

An employee can generally exclude from gross income up to $5,000 ($2,500 if married filing separately) of benefits received under a DCAP each year.

However, the exclusion can't be more than the smaller of the earned income of either the employee or employee's spouse. Special rules apply to determine the earned income of a spouse who is either a student or not

able to care for themselves. For more information on the earned income limit, see Pub. 503.

Exception for highly compensated employees.

You can't exclude dependent care assistance from the wages of a highly compensated employee unless the benefits provided under the program don't favor highly compensated employees and the program meets the requirements described in section 129(d) of the Internal Revenue Code.

For this exclusion, a highly compensated employee for 2025 is an employee who meets either of the following tests.

1. The employee was a 5% owner at any time during the year or the preceding year.

2. The employee received more than $155,000 in pay for the preceding year.

You can choose to ignore test (2) if the employee wasn't also in the top 20% of employees when ranked by pay for the preceding year.

Form W-2.

Report the value of all dependent care assistance you provide to an employee under a DCAP in box 10 of the employee's Form W-2. Include any amounts you can't exclude from the employee's wages in boxes 1, 3, and 5. Report in box 10 both the nontaxable portion of assistance (up to $5,000) and any assistance above that amount that is taxable to the employee.

Example.

Oak Co. provides a dependent care assistance FSA to its employees through a cafeteria plan. In addition, it provides occasional on-site dependent care to its employees at no cost. Emily, an employee of Oak

Co., had $4,500 deducted from her pay for the dependent care FSA. In addition, Emily used the on-site dependent care several times. The FMV of the on-site care was $700. Emily's Form W-2 should report $5,200 of dependent care assistance in box 10 ($4,500 FSA plus $700 on-site dependent care). Boxes 1, 3, and 5 should include $200 (the amount in excess of the nontaxable assistance), and applicable taxes should be withheld on that amount.

Educational Assistance

This exclusion applies to educational assistance you provide to employees under an educational assistance program. The exclusion also applies to graduate-level courses.

Educational assistance means amounts you pay or incur for your employees' education expenses. These expenses generally include the cost of books, equipment, fees, supplies, and tuition. However, these expenses don't include the cost of a course or other education involving sports, games, or hobbies, unless the education:

- Has a reasonable relationship to your business, or

- Is required as part of a degree program.

Education expenses don't include the cost of tools or supplies (other than textbooks) your employee is allowed to keep at the end of the course. Nor do they include the cost of lodging, meals, or transportation. Your employee must be able to provide substantiation to you that the educational assistance provided was used for qualifying education expenses.

Exclusion for employer payments of student loans.

Employer-provided educational assistance benefits include payments made after March 27, 2020, and before January 1, 2026, whether paid to the employee or to a lender, of principal or interest on any qualified education loan incurred by the employee for education of the employee. Qualified education loans are defined in chapter 10 of Pub. 970.

Educational assistance program.

An educational assistance program is a separate written plan that provides educational assistance only to your employees. The program qualifies only if all of the following tests are met.

- The program benefits employees who qualify under rules set up by you that don't favor highly compensated employees. To determine whether your program meets this test, don't consider employees excluded from your program who are covered by a collective bargaining agreement if there is evidence that educational assistance was a subject of good-faith bargaining.

- The program doesn't provide more than 5% of its benefits during the year for shareholders or owners (or their spouses or dependents). A shareholder or owner is someone who owns (on any day of the tax year) more than 5% of the stock or of the capital or profits interest of your business.

- The program doesn't allow employees to choose to receive cash or other benefits that must be included in gross income instead of educational assistance.

- You give reasonable notice of the program to eligible employees.

Your program can cover former employees if their employment is the reason for the coverage.

For this exclusion, a highly compensated employee for 2025 is an employee who meets either of the following tests.

1. The employee was a 5% owner at any time during the year or the preceding year.

2. The employee received more than $155,000 in pay for the preceding year.

You can choose to ignore test (2) if the employee wasn't also in the top 20% of employees when ranked by pay for the preceding year.

Employee.

For this exclusion, treat the following individuals as employees.

- A current employee.

- A former employee who retired, left on disability, or was laid off.

- A leased employee who has provided services to you on a substantially full-time basis for at least a year if the services are performed under your primary direction or control.

- Yourself (if you're a sole proprietor).

- A partner who performs services for a partnership.

Exclusion from wages.

You can exclude up to $5,250 of educational assistance you provide to an employee under an educational assistance program from the employee's wages each year.

Assistance over $5,250.

If you don't have an educational assistance plan, or you provide an employee with assistance exceeding $5,250, you must include the value of these benefits as wages, unless the benefits are working condition benefits. Working condition benefits may be excluded from wages. Property or a service provided is a working condition benefit to the extent that if the employee paid for it, the amount paid would have been allowable as a business or depreciation expense. See *Working Condition Benefits*, later in this section.

Self-employed individuals, shareholders, and owners.

While there are no specific income limits for receiving educational assistance benefits, an educational assistance program must satisfy certain requirements under section 127 of the Internal Revenue Code and Regulations section 1.127-2, including not being discriminatory in favor of employees who are highly compensated employees. An individual who is self-employed within the meaning of section 401(c)(1) of the Internal Revenue Code may receive educational assistance. While shareholders and owners may receive educational assistance, not more than 5% of the amounts paid or incurred by the employer for educational assistance during the year may be provided for the class of individuals who are shareholders or owners (or their spouses or dependents), each of whom (on any day of the tax year) owns more than 5% of the stock or of the capital or profits interest in the employer.

If the owners are the only employees, they can't receive educational assistance under section 127 of the Internal Revenue Code because of the 5% benefit limitation described above. The following formula can be used to determine the amount of educational assistance that an owner/employee can receive. Multiply the total amount of educational assistance provided to employees other than the owner/employee by 5.263158% (0.05263158). Then round down to two decimal places, but not greater than $5,250.

Example. A company has a single owner/employee and 19 other employees. If each employee (other than the owner/employee) claims the educational assistance and receives the full $5,250, the owner/employee may also receive $5,250. The total amount of educational assistance provided to employees (other than the owner/employee) is $5,250 x 19 = $99,750. $99,750 x .05263158 = $5,250.000105 (rounded down to two decimal places is $5,250.00). If the owner/employee receives $5,250 in educational assistance, then the 5% benefit limitation would be satisfied. The total amount of educational assistance provided under the program is $99,750 + $5,250 = $105,000, and 5% of $105,000 is $5,250.

However, if not every employee receives the full $5,250, the amount the owner/employee may exclude is reduced. If only eight of the employees (other than the owner/employee) receive $5,250, then the total amount of

educational assistance provided to employees (other than the owner/employee) is 8 x $5,250 = $42,000. $42,000 x .05263158 = $2,210.52636 (rounded down to two decimal places is $2,210.52). If the owner/employee receives $2,210.52 in educational assistance, then the 5% benefit limitation would be satisfied. The total amount of educational assistance provided under the program is $42,000 + $2,210.52 = $44,210.52, and 5% of $44,210.52 is approximately $2,210.52.

Employee Discounts

This exclusion applies to a price reduction you give your employee on property or services you offer to customers in the ordinary course of the line of business in which the employee performs substantial services. It applies whether the property or service is provided at no charge (in which case only part of the discount may be excludable as a qualified employee discount) or at a reduced price. It also applies if the benefit is provided through a partial or total cash rebate.

The benefit may be provided either directly by you or indirectly through a third party. For example, an employee of an appliance manufacturer may receive a qualified employee discount on the manufacturer's appliances purchased at a retail store that offers the appliances for sale to customers.

Employee discounts don't apply to discounts on real property or discounts on personal property of a kind commonly held for investment (such as stocks or bonds). They also don't include discounts on a line of business of the employer for which the employee doesn't provide substantial services, or discounts on property or services of a kind that aren't offered for sale to customers. Therefore, discounts on items sold in an employee store that aren't sold to customers aren't excluded from employee income. Also, employee discounts provided by another employer through a reciprocal agreement aren't excluded.

Employee.

For this exclusion, treat the following individuals as employees.

- A current employee.

- A former employee who retired or left on disability.

- A surviving spouse of an individual who died while an employee.

- A surviving spouse of an employee who retired or left on disability.

- A leased employee who has provided services to you on a substantially full-time basis for at least a year if the services are performed under your primary direction or control.

- A partner who performs services for a partnership.

Treat discounts you provide to the spouse or dependent child of an employee as provided to the employee. For this fringe benefit, dependent child is a child or stepchild who is the employee's dependent or who, if both parents are deceased, hasn't attained the age of 25. Treat a child of divorced parents as a dependent of both parents.

Exclusion from wages.

You can generally exclude the value of an employee discount you provide an employee from the employee's wages, up to the following limits.

- For a discount on services, 20% of the price you charge nonemployee customers for the service.

- For a discount on merchandise or other property, your gross profit percentage times the price you charge nonemployee customers for the property.

Generally, determine your gross profit percentage in the line of business based on all property you offer to customers (including employee customers) and your experience during the tax year immediately before the tax year in which the discount is available. To figure your gross profit percentage, subtract the total cost of the property from the total sales price of the property and divide the result by the total sales price of the property. Employers that are in their first year of existence may estimate their gross

profit percentage based on its mark-up from cost or refer to an appropriate industry average. If substantial changes in an employer's business indicate at any time that it is inappropriate for the prior year's gross profit percentage to be used for the current year, the employer must, within a reasonable period, redetermine the gross profit percentage for the remaining portion of the current year as if such portion of the year were the first year of the employer's existence.

Exception for highly compensated employees.

You can't exclude from the wages of a highly compensated employee any part of the value of a discount that isn't available on the same terms to one of the following groups.

- All of your employees.

- A group of employees defined under a reasonable classification you set up that doesn't favor highly compensated employees.

For this exclusion, a highly compensated employee for 2025 is an employee who meets either of the following tests.

1. The employee was a 5% owner at any time during the year or the preceding year.

2. The employee received more than $155,000 in pay for the preceding year.

You can choose to ignore test (2) if the employee wasn't also in the top 20% of employees when ranked by pay for the preceding year.

Employee Stock Options

There are three kinds of stock options—incentive stock options, employee stock purchase plan options, and nonstatutory (nonqualified) stock options.

Wages for social security, Medicare, and FUTA taxes don't include remuneration resulting from the exercise of an incentive stock option or an

employee stock purchase plan option, or from any disposition of stock acquired by exercising such an option.

Additionally, federal income tax withholding isn't required on the income resulting from a disqualifying disposition of stock acquired by the exercise of an incentive stock option or an employee stock purchase plan option, or on income equal to the discount portion of stock acquired by the exercise of an employee stock purchase plan option resulting from any qualifying disposition of the stock. The employer must report as income in box 1 of Form W-2 (a) the discount portion of stock acquired by the exercise of an employee stock purchase plan option upon a qualifying disposition of the stock, and (b) the spread (between the exercise price and the FMV of the stock at the time of exercise) upon a disqualifying disposition of stock acquired by the exercise of an incentive stock option or an employee stock purchase plan option.

An employer must report the excess of the FMV of stock received upon exercise of a nonstatutory stock option over the amount paid for the stock option on Form W-2 in boxes 1, 3 (up to the social security wage base), and 5, and in box 12 using the code V. See Regulations section 1.83-7.

An employee who transfers their interest in nonstatutory stock options to the employee's former spouse incident to a divorce isn't required to include an amount in gross income upon the transfer. The former spouse, rather than the employee, is required to include an amount in gross income when the former spouse exercises the stock options. See Revenue Ruling 2002-22 and Revenue Ruling 2004-60 for details. You can find Revenue Ruling 2002-22 on page 849 of Internal Revenue Bulletin 2002-19 at IRS.gov/pub/irs-irbs/irb02-19.pdf. Revenue Ruling 2004-60, 2004-24 I.R.B. 1051, is available at IRS.gov/irb/2004-24_IRB#RR-2004-60.

Employee stock options aren't subject to Railroad Retirement Tax.

In *Wisconsin Central Ltd. v. United States*, 138 S. Ct. 2067, the U. S. Supreme Court ruled that employee stock options (whether statutory or nonstatutory) aren't "money remuneration" subject to the RRTA. If you're a

railroad employer, don't withhold Tier 1 and Tier 2 taxes on compensation from railroad employees covered by the RRTA exercising such options. You must still withhold federal income tax on taxable compensation from railroad employees exercising their options.

Section 83(i) election to defer income on equity grants.

Under section 83(i) of the Internal Revenue Code, qualified employees who are granted stock options or restricted stock units (RSUs) and who later receive stock upon exercise of the option or upon settlement of the RSU (qualified stock) may elect to defer the recognition of income for up to 5 years if the corporation's stock wasn't readily tradable on an established securities market during any prior calendar year, if the corporation has a written plan under which not less than 80% of all U.S. employees are granted options or RSUs with the same rights and privileges to receive qualified stock, and if certain other requirements are met. An election under section 83(i) applies only for federal income tax purposes. The election has no effect on the application of social security, Medicare, and FUTA taxes. For federal income tax purposes, the employer must withhold federal income tax at 37% in the tax year that the amount deferred is included in the employee's income. If a section 83(i) election is made for an option exercise, that option will not be considered an incentive stock option or an option granted pursuant to an employee stock purchase plan. These rules apply to stock attributable to options exercised, or RSUs settled, after December 31, 2017. For more information, see section 83(i); and Notice 2018-97, 2018-52 I.R.B. 1062, available at IRS.gov/irb/2018-52_IRB#NOT-2018-97.

Reporting requirements.

For each employee, you must report in box 12 of Form W-2 using code GG the amount included in income in the calendar year from qualified equity grants under section 83(i). You must also report in box 12 using code HH

the total amount of income deferred under section 83(i) determined as of the close of the calendar year.

More information.

For more information about employee stock options, see sections 83, 421, 422, and 423 of the Internal Revenue Code and their related regulations.

Employer-Provided Cell Phones

The value of the business use of an employer-provided cell phone, provided primarily for noncompensatory business reasons, is excludable from an employee's income as a working condition fringe benefit. Personal use of an employer-provided cell phone, provided primarily for noncompensatory business reasons, is excludable from an employee's income as a de minimis fringe benefit. The term "cell phone" also includes other similar telecommunications equipment. For the rules relating to these types of benefits, see *De Minimis (Minimal) Benefits*, earlier in this section, and *Working Condition Benefits*, later in this section.

Noncompensatory business purposes.

You provide a cell phone primarily for noncompensatory business purposes if there are substantial business reasons for providing the cell phone. Examples of substantial business reasons include the employer's:

- Need to contact the employee at all times for work-related emergencies,

- Requirement that the employee be available to speak with clients at times when the employee is away from the office, and

- Need to speak with clients located in other time zones at times outside the employee's normal workday.

Cell phones provided to promote goodwill, boost morale, or attract prospective employees.

You can't exclude from an employee's wages the value of a cell phone provided to promote goodwill of an employee, to attract a prospective employee, or as a means of providing additional compensation to an employee.

Additional information.

For additional information on the tax treatment of employer-provided cell phones, see Notice 2011-72, 2011-38 I.R.B. 407, available at IRS.gov/irb/2011-38_IRB#NOT-2011-72.

Group-Term Life Insurance Coverage

This exclusion applies to life insurance coverage that meets all the following conditions.

- It provides a general death benefit that isn't included in income.

- You provide it to a group of employees. See *The 10-employee rule*, later.

- It provides an amount of insurance to each employee based on a formula that prevents individual selection. This formula must use factors such as the employee's age, years of service, pay, or position.

- You provide it under a policy you directly or indirectly carry. Even if you don't pay any of the policy's cost, you're considered to carry it if you arrange for payment of its cost by your employees and charge at least one employee less than, and at least one other employee more than, the cost of their insurance. Determine the cost of the insurance, for this purpose, as explained under *Coverage over the limit*, later.

Group-term life insurance doesn't include the following insurance.

- Insurance that doesn't provide general death benefits, such as travel insurance or a policy providing only accidental death benefits.

- Life insurance on the life of your employee's spouse or dependent. However, you may be able to exclude the cost of this insurance from the employee's wages as a de minimis benefit. See *De Minimis (Minimal) Benefits*, earlier in this section.

- Insurance provided under a policy that provides a permanent benefit (an economic value that extends beyond 1 policy year, such as paid-up or cash-surrender value), unless certain requirements are met. See Regulations section 1.79-1 for details.

Employee.

For this exclusion, treat the following individuals as employees.

1. A current common-law employee.

2. A full-time life insurance agent who is a current statutory employee.

3. An individual who was formerly your employee under (1) or (2).

4. A leased employee who has provided services to you on a substantially full-time basis for at least a year if the services are performed under your primary direction or control.

Exception for S corporation shareholders.

Don't treat a 2% shareholder of an S corporation as an employee of the corporation for this purpose. A 2% shareholder is someone who directly or indirectly owns (for any day during the tax year) more than 2% of the corporation's stock or stock with more than 2% of the voting power. Treat a 2% shareholder as you would a partner in a partnership for fringe benefit purposes, but don't treat the benefit as a reduction in distributions to the 2% shareholder. For more information, see Revenue Ruling 91-26, 1991-1 C.B. 184.

The 10-employee rule.

Generally, life insurance isn't group-term life insurance unless you provide it at some time during the calendar year to at least 10 full-time employees.

For this rule and the first exception discussed next, count employees who choose not to receive the insurance as if they do receive insurance, unless, to receive it, they must contribute to the cost of benefits other than the group-term life insurance. For example, count an employee who could receive insurance by paying part of the cost, even if that employee chooses not to receive it. However, don't count an employee who chooses not to receive insurance if the employee must pay part or all of the cost of permanent benefits in order to obtain group-term life insurance. A permanent benefit is an economic value extending beyond 1 policy year (for example, a paid-up or cash-surrender value) that is provided under a life insurance policy.

Exceptions.

Even if you don't meet the 10-employee rule, two exceptions allow you to treat insurance as group-term life insurance.

Under the first exception, you don't have to meet the 10-employee rule if all the following conditions are met.

1. If evidence that the employee is insurable is required, it is limited to a medical questionnaire (completed by the employee) that doesn't require a physical.

2. You provide the insurance to all your full-time employees or, if the insurer requires the evidence mentioned in (1), to all full-time employees who provide evidence the insurer accepts.

3. You figure the coverage based on either a uniform percentage of pay or the insurer's coverage brackets that meet certain requirements. See Regulations section 1.79-1 for details.

Under the second exception, you don't have to meet the 10-employee rule if all the following conditions are met.

- You provide the insurance under a common plan covering your employees and the employees of at least one other employer who isn't related to you.

- The insurance is restricted to, but mandatory for, all your employees who belong to, or are represented by, an organization (such as a union) that carries on substantial activities besides obtaining insurance.

- Evidence of whether an employee is insurable doesn't affect an employee's eligibility for insurance or the amount of insurance that employee gets.

To apply either exception, don't consider employees who were denied insurance for any of the following reasons.

- They were 65 or older.

- They customarily work 20 hours or less a week or 5 months or less in a calendar year.

- They haven't been employed for the waiting period given in the policy. This waiting period can't be more than 6 months.

Exclusion from wages.

You can generally exclude the cost of up to $50,000 of group-term life insurance coverage from the wages of an insured employee. You can exclude the same amount from the employee's wages when figuring social security and Medicare taxes. In addition, you don't have to withhold federal income tax or pay FUTA tax on any group-term life insurance you provide to an employee.

Coverage over the limit.

You must include in your employee's wages the cost of group-term life insurance beyond $50,000 worth of coverage, reduced by the amount the

employee paid toward the insurance. Report it as wages in boxes 1, 3, and 5 of the employee's Form W-2. Also, show it in box 12 with code C. The amount is subject to social security and Medicare taxes, and you may, at your option, withhold federal income tax.

Figure the monthly cost of the insurance to include in the employee's wages by multiplying the number of thousands of dollars of all insurance coverage over $50,000 (figured to the nearest $100) by the cost shown in Table 2-2. For all coverage provided within the calendar year, use the employee's age on the last day of the employee's tax year. You must prorate the cost from the table if less than a full month of coverage is involved.

Table 2-2. Cost Per $1,000 of Protection for 1 Month

Age	Cost
Under 25	$ 0.05
25 through 29	0.06
30 through 34	0.08
35 through 39	0.09
40 through 44	0.10
45 through 49	0.15
50 through 54	0.23
55 through 59	0.43
60 through 64	0.66
65 through 69	1.27
70 and older	2.06

You figure the total cost to include in the employee's wages by multiplying the monthly cost by the number of months' coverage at that cost.

Example.

Tom's employer provides Tom with group-term life insurance coverage of $200,000. Tom is 45 years old, isn't a key employee, and pays $100 per year toward the cost of the insurance. Tom's employer must include $170 in Tom's wages. The $200,000 of insurance coverage is reduced by $50,000. The yearly cost of $150,000 of coverage is $270 ($0.15 x 150 x 12), and is reduced by the $100 Tom pays for the insurance. The employer includes $170 in boxes 1, 3, and 5 of Tom's Form W-2. The employer also enters $170 in box 12 with code C.

Coverage for dependents.

Group-term life insurance coverage paid by the employer for the spouse or dependents of an employee may be excludable from income as a de minimis fringe benefit if the face amount isn't more than $2,000. If the face amount is greater than $2,000, the dependent coverage may be excludable from income as a de minimis fringe benefit if the excess (if any) of the cost of insurance over the amount the employee paid for it on an after-tax basis is so small that accounting for it is unreasonable or administratively impracticable.

Former employees.

When group-term life insurance over $50,000 is provided to an employee (including retirees) after their termination, the employee share of social security and Medicare taxes on that period of coverage is paid by the former employee with their tax return and isn't collected by the employer. You're not required to collect those taxes. You must, however, pay the employer share of social security and Medicare taxes. Use Table 2-2 to determine the amount of additional income that is subject to social security and Medicare taxes for coverage provided after separation from service. Report the uncollected amounts separately in box 12 of Form W-2 using

codes M and N. See the General Instructions for Forms W-2 and W-3 and the instructions for your employment tax return.

Exception for key employees.

Generally, if your group-term life insurance plan favors key employees as to participation or benefits, you must include the entire cost of the insurance in your key employees' wages. This exception generally doesn't apply to church plans. When figuring social security and Medicare taxes, you must also include the entire cost in the employees' wages. Include the cost in boxes 1, 3, and 5 of Form W-2. However, you don't have to withhold federal income tax or pay FUTA tax on the cost of any group-term life insurance you provide to an employee.

For this purpose, the cost of the insurance is the greater of the following amounts.

- The premiums you pay for the employee's insurance. See Regulations section 1.79-4T(Q&A 6) for more information.

- The cost you figure using Table 2-2.

For this exclusion, a key employee during 2025 is an employee or former employee who is one of the following individuals. See section 416(i) of the Internal Revenue Code for more information.

1. An officer having annual pay of more than $230,000.

2. An individual who for 2025 is either of the following.

    a. A 5% owner of your business.

    b. A 1% owner of your business whose annual pay is more than $150,000.

A former employee who was a key employee upon retirement or separation from service is also a key employee.

Your plan doesn't favor key employees as to participation if at least one of the following is true.

- It benefits at least 70% of your employees.

- At least 85% of the participating employees aren't key employees.

- It benefits employees who qualify under a set of rules you set up that don't favor key employees.

Your plan meets this participation test if it is part of a [cafeteria plan](#) (discussed earlier in section 1) and it meets the participation test for those plans.

When applying this test, don't consider employees who:

- Have not completed 3 years of service;

- Are part time or seasonal;

- Are nonresident aliens who receive no U.S. source earned income from you; or

- Aren't included in the plan but are in a unit of employees covered by a collective bargaining agreement, if the benefits provided under the plan were the subject of good-faith bargaining between you and employee representatives.

Your plan doesn't favor key employees as to benefits if all benefits available to participating key employees are also available to all other participating employees. Your plan doesn't favor key employees just because the amount of insurance you provide to your employees is uniformly related to their pay.

S corporation shareholders.

Because you can't treat a 2% shareholder of an S corporation as an employee for this exclusion, you must include the cost of all group-term life insurance coverage you provide the 2% shareholder in their wages. When figuring social security and Medicare taxes, you must also include the cost of this coverage in the 2% shareholder's wages. Include the cost in boxes 1, 3, and 5 of Form W-2. However, you don't have to withhold federal

income tax or pay FUTA tax on the cost of any group-term life insurance coverage you provide to the 2% shareholder.

Health Savings Accounts (HSAs)

An HSA is an account owned by a qualified individual who is generally your employee or former employee. Any contributions that you make to an HSA become the employee's property and can't be withdrawn by you. Contributions to the account are used to pay current or future medical expenses of the account owner, their spouse, and any qualified dependent. The medical expenses must not be reimbursable by insurance or other sources and their payment from HSA funds (distribution) won't give rise to a medical expense deduction on the individual's federal income tax return.

Eligibility.

A qualified individual must be covered by a High Deductible Health Plan (HDHP) and not be covered by other health insurance except for permitted insurance listed under section 223(c)(3) or insurance for accidents, disability, dental care, vision care, long-term care, or (in the case of months beginning after March 31, 2022, and before January 1, 2023, and plan years beginning on or before December 31, 2021, or after December 31, 2022, and before January 1, 2025) telehealth and other remote care. For calendar year 2025, a qualifying HDHP must have a deductible of at least $1,650 for self-only coverage or $3,300 for family coverage and must limit annual out-of-pocket expenses of the beneficiary to $8,300 for self-only coverage and $16,600 for family coverage.

There are no income limits that restrict an individual's eligibility to contribute to an HSA nor is there a requirement that the account owner have earned income to make a contribution.

Exceptions.

An individual isn't a qualified individual if they can be claimed as a dependent on another person's tax return. Also, an employee's participation

in a health FSA or HRA generally disqualifies the individual (and employer) from making contributions to their HSA. However, an individual may qualify to participate in an HSA if they are participating in only a limited-purpose FSA or HRA or a post-deductible FSA. For more information, see *Other employee health plans* in Pub. 969.

Employer contributions.

Up to specified dollar limits, cash contributions to the HSA of a qualified individual (determined monthly) are exempt from federal income tax withholding, social security tax, Medicare tax, and FUTA tax if you reasonably believe that the employee can exclude the benefits from gross income. For 2025, you can contribute up to $4,300 for self-only coverage under an HDHP or $8,550 for family coverage under an HDHP to a qualified individual's HSA.

The contribution amounts listed above are increased by $1,000 for a qualified individual who is age 55 or older at any time during the year. For two qualified individuals who are married to each other and who are each age 55 or older at any time during the year, each spouse's contribution limit is increased by $1,000, provided each spouse has a separate HSA. No contributions can be made to an individual's HSA after they become enrolled in Medicare Part A or Part B.

Nondiscrimination rules.

Your contribution amount to an employee's HSA must be comparable for all employees who have comparable coverage during the same period. Otherwise, there will be an excise tax equal to 35% of the amount you contributed to all employees' HSAs.

For guidance on employer comparable contributions to HSAs under section 4980G in instances where an employee hasn't established an HSA by December 31 and in instances where an employer accelerates

contributions for the calendar year for employees who have incurred qualified medical expenses, see Regulations section 54.4980G-4.

Exception.

The Tax Relief and Health Care Act of 2006 allows employers to make larger HSA contributions for a nonhighly compensated employee than for a highly compensated employee. A highly compensated employee for 2025 is an employee who meets either of the following tests.

1. The employee was a 5% owner at any time during the year or the preceding year.

2. The employee received more than $155,000 in pay for the preceding year.

You can choose to ignore test (2) if the employee wasn't also in the top 20% of employees when ranked by pay for the preceding year.

Partnerships and S corporations.

Partners and 2% shareholders of an S corporation aren't eligible for salary reduction (pre-tax) contributions to an HSA. Employer contributions to the HSA of a bona fide partner or 2% shareholder are treated as distributions or guaranteed payments, as determined by the facts and circumstances. For more information, see Notice 2005-8, 2005-4 I.R.B. 368, available at IRS.gov/irb/2005-04_IRB#NOT-2005-8.

Cafeteria plans.

You may contribute to an employee's HSA using a cafeteria plan and your contributions aren't subject to the statutory comparability rules. However, cafeteria plan nondiscrimination rules still apply. For example, contributions under a cafeteria plan to employee HSAs can't be greater for higher-paid

employees than they are for lower-paid employees. Contributions that favor lower-paid employees aren't prohibited.

Reporting requirements.

You must report your contributions to an employee's HSA in box 12 of Form W-2 using code W. The trustee or custodian of the HSA, generally a bank or insurance company, reports distributions from the HSA using Form 1099-SA.

More information.

For more information about HSAs, see Pub. 969.

Lodging on Your Business Premises

You can exclude the value of lodging you furnish to an employee from the employee's wages if it meets the following tests.

- It is furnished on your business premises.
- It is furnished for your convenience.
- The employee must accept it as a condition of employment.

Different tests may apply to lodging furnished by educational institutions. See section 119(d) of the Internal Revenue Code for details.

If you allow your employee to choose to receive additional pay instead of lodging, then the lodging, if chosen, isn't excluded. The exclusion also doesn't apply to cash allowances for lodging.

On your business premises.

For this exclusion, your business premises is generally your employee's place of work. For example, if you're a household employer, then lodging furnished in your home to a household employee would be considered lodging furnished on your business premises. For special rules that apply to

lodging furnished in a camp located in a foreign country, see section 119(c) of the Internal Revenue Code and its regulations.

For your convenience.

Whether or not you furnish lodging for your convenience as an employer depends on all the facts and circumstances. You furnish the lodging to your employee for your convenience if you do this for a substantial business reason other than to provide the employee with additional pay. This is true even if a law or an employment contract provides that the lodging is furnished as pay. However, a written statement that the lodging is furnished for your convenience isn't sufficient.

Condition of employment.

Lodging meets this test if you require your employees to accept the lodging because they need to live on your business premises to be able to properly perform their duties. Examples include employees who must be available at all times and employees who couldn't perform their required duties without being furnished the lodging.

It doesn't matter whether you must furnish the lodging as pay under the terms of an employment contract or a law fixing the terms of employment.

Example of qualifying lodging.

You employ Sam at a construction project at a remote job site in Alaska. Due to the inaccessibility of facilities for the employees who are working at the job site to obtain lodging and the prevailing weather conditions, you furnish lodging to your employees at the construction site in order to carry on the construction project. You require that your employees accept the lodging as a condition of their employment. You may exclude the lodging that you provide from Sam's wages. Additionally, because sufficient eating facilities aren't available near your place of employment, you may also

exclude meals you provide to Sam from his wages, as discussed in *Proper meals not otherwise available* under *Meals on Your Business Premises*, later in this section.

Example of nonqualifying lodging.

A hospital gives Joan, an employee of the hospital, the choice of living at the hospital free of charge or living elsewhere and receiving a cash allowance in addition to Joan's regular salary. If Joan chooses to live at the hospital, the hospital can't exclude the value of the lodging from her wages because she isn't required to live at the hospital to properly perform the duties of her employment.

S corporation shareholders.

For this exclusion, don't treat a 2% shareholder of an S corporation as an employee of the corporation. A 2% shareholder is someone who directly or indirectly owns (for any day during the tax year) more than 2% of the corporation's stock or stock with more than 2% of the voting power. Treat a 2% shareholder as you would a partner in a partnership for fringe benefit purposes, but don't treat the benefit as a reduction in distributions to the 2% shareholder. For more information, see Revenue Ruling 91-26, 1991-1 C.B. 184.

Meals

This section discusses the exclusion rules that apply to de minimis meals and meals on your business premises.

De Minimis Meals

You can exclude any occasional meal you provide to an employee if it has so little value (taking into account how frequently you provide meals to your employees) that accounting for it would be unreasonable or administratively impracticable. The exclusion applies, for example, to the following items.

- Coffee, doughnuts, or soft drinks.

- Occasional meals or meal money provided to enable an employee to work overtime. However, the exclusion doesn't apply to meal money figured on the basis of hours worked (for example, $2.00 per hour for each hour over 8 hours), or meals or meal money provided on a regular or routine basis.

- Occasional parties or picnics for employees and their guests.

Employee.

For this exclusion, treat any recipient of a de minimis meal as an employee.

Employer-operated eating facility for employees.

The de minimis meals exclusion also applies to meals you provide at an employer-operated eating facility for employees if the annual revenue from the facility equals or exceeds the direct operating costs of the facility. Direct operating costs include the cost of food and beverages, and labor costs (including employment taxes) of employees whose services relating to the facility are performed primarily on the premises of the eating facility. Therefore, for example, the labor costs attributable to cooks and waitstaff are included in direct operating costs, but the labor cost attributable to a manager of an eating facility whose services aren't primarily performed on the premises of the eating facility aren't included in direct operating costs.

For this purpose, your revenue from providing a meal is considered equal to the facility's direct operating costs to provide that meal if its value can be excluded from an employee's wages, as explained under _Meals on Your Business Premises_, later. If you provide free or discounted meals to volunteers at a hospital and you can reasonably determine the number of meals you provide, then you may disregard these costs and revenues. If you charge nonemployees a greater amount than employees, then you must disregard all costs and revenues attributable to these nonemployees.

An employer-operated eating facility for employees is an eating facility that meets all the following conditions.

- You own or lease the facility.

- You operate the facility. You're considered to operate the eating facility if you have a contract with another to operate it.

- The facility is on or near your business premises.

- You provide meals (food, drinks, and related services) at the facility during, or immediately before or after, the employee's workday.

Exclusion from wages.

You can generally exclude the value of de minimis meals you provide to an employee from the employee's wages.

Exception for highly compensated employees.

You can't exclude from the wages of a highly compensated employee the value of a meal provided at an employer-operated eating facility that isn't available on the same terms to one of the following groups.

- All of your employees.

- A group of employees defined under a reasonable classification you set up that doesn't favor highly compensated employees.

For this exclusion, a highly compensated employee for 2025 is an employee who meets either of the following tests.

1. The employee was a 5% owner at any time during the year or the preceding year.

2. The employee received more than $155,000 in pay for the preceding year.

You can choose to ignore test (2) if the employee wasn't also in the top 20% of employees when ranked by pay for the preceding year.

 Section 13304 of P.L. 115-97 changed the rules for the deduction of food or beverage expenses that are excludable from employee income as a de minimis fringe benefit. For amounts incurred or paid after 2017, the 50% limit on deductions for food or beverage expenses also applies to food or beverage expenses excludable from employee income as a de minimis fringe benefit. However, food or beverage expenses related to employee recreation, such as holiday parties or annual picnics, aren't subject to the 50% limit on deductions when made primarily for the benefit of your employees other than employees who are officers, shareholders or other owners who own a 10% or greater interest in your business, or other highly compensated employees. For more information, see Regulations section 1.274-12. While your business deduction may be limited, the fringe benefit exclusion rules still apply and the de minimis fringe benefits may be excluded from your employee's wages, as discussed earlier..

Meals on Your Business Premises

You can exclude the value of meals you furnish to an employee from the employee's wages if they meet the following tests.

- They are furnished on your business premises.

- They are furnished for your convenience.

If you allow your employee to choose to receive additional pay instead of meals, then the meals, if chosen, aren't excluded. The exclusion also doesn't apply to cash allowances for meals.

On your business premises.

Generally, for this exclusion, the employee's place of work is your business premises.

For your convenience.

Whether you furnish meals for your convenience as an employer depends on all the facts and circumstances. You furnish the meals to your employee for your convenience if you do this for a substantial business reason other than to provide the employee with additional pay. This is true even if a law or an employment contract provides that the meals are furnished as pay. However, a written statement that the meals are furnished for your convenience isn't sufficient.

Meals excluded for all employees if excluded for more than half.

If more than half of your employees who are furnished meals on your business premises are furnished the meals for your convenience, you can treat all meals you furnish to employees on your business premises as furnished for your convenience.

Food service employees.

Meals you furnish to a restaurant or other food service employee during, or immediately before or after, the employee's working hours are furnished for your convenience. For example, if a waitstaff works during the breakfast and lunch periods, you can exclude from their wages the value of the breakfast and lunch you furnish in your restaurant for each day they work.

⚠️ _The temporary 100% deduction for expenses that were paid or incurred after December 31, 2020, and before January 1, 2023, for food or beverage expenses provided by a restaurant has expired. Generally, the 50% deduction continues to apply.._

Example.

You operate a restaurant business. You furnish your employee, Carol, who is a server working 7 a.m. to 4 p.m., two meals during each workday. You encourage but don't require Carol to have breakfast on the business

premises before starting work. Carol must have lunch on the premises. Because Carol is a food service employee and works during the normal breakfast and lunch periods, you can exclude from her wages the value of her breakfast and lunch.

If you also allow Carol to have meals on your business premises without charge on Carol's days off, you can't exclude the value of those meals from Carol's wages.

Employees available for emergency calls.

Meals you furnish during working hours so an employee will be available for emergency calls during the meal period are furnished for your convenience. You must be able to show these emergency calls have occurred or can reasonably be expected to occur, and that the calls have resulted, or will result, in you calling on your employees to perform their jobs during their meal period.

Example.

A hospital maintains a cafeteria on its premises where all of its 230 employees may get meals at no charge during their working hours. The hospital must have 120 of its employees available for emergencies. Each of these 120 employees is, at times, called upon to perform services during the meal period. Although the hospital doesn't require these employees to remain on the premises, they rarely leave the hospital during their meal period. Since the hospital furnishes meals on its premises to its employees so that more than half of them are available for emergency calls during meal periods, the hospital can exclude the value of these meals from the wages of all of its employees.

Short meal periods.

Meals you furnish during working hours are furnished for your convenience if the nature of your business (not merely a preference) restricts an employee to a short meal period (such as 30 or 45 minutes) and the employee can't be expected to eat elsewhere in such a short time. For example, meals can qualify for this treatment if your peak workload occurs during the normal lunch hour. However, they don't qualify if the reason for the short meal period is to allow the employee to leave earlier in the day.

Example.

Frank is a bank teller who works from 9 a.m. to 5 p.m. The bank furnishes Frank's lunch without charge in a cafeteria the bank maintains on its premises. The bank furnishes these meals to Frank to limit his lunch period to 30 minutes, because the bank's peak workload occurs during the normal lunch period. If Frank got lunch elsewhere, it would take him much longer than 30 minutes and the bank strictly enforces the time limit. The bank can exclude the value of these meals from Frank's wages.

Proper meals not otherwise available.

Meals you furnish during working hours are furnished for your convenience if the employee couldn't otherwise get proper meals within a reasonable period of time. For example, meals can qualify for this treatment if there are insufficient eating facilities near the place of employment. For an example of this, see *Example of qualifying lodging*, earlier in this section.

Meals after work hours.

Generally, meals furnished before or after the working hours of an employee aren't considered as furnished for your convenience. However, meals you furnish to an employee immediately after working hours are furnished for your convenience if you would have furnished them during working hours for a substantial nonpay business reason but, because of the work duties, they weren't obtained during working hours.

Meals you furnish to promote goodwill, boost morale, or attract prospective employees.

Meals you furnish to promote goodwill, boost morale, or attract prospective employees aren't considered furnished for your convenience. However, you may be able to exclude their value, as discussed under *De Minimis Meals*, earlier.

Meals furnished on nonworkdays or with lodging.

You generally can't exclude from an employee's wages the value of meals you furnish on a day when the employee isn't working. However, you can exclude these meals if they are furnished with lodging that is excluded from the employee's wages. See *Lodging on Your Business Premises*, earlier in this section.

Meals with a charge.

The fact that you charge for the meals and that your employees may accept or decline the meals isn't taken into account in determining whether or not meals are furnished for your convenience.

S corporation shareholders.

For this exclusion, don't treat a 2% shareholder of an S corporation as an employee of the corporation. A 2% shareholder is someone who directly or indirectly owns (for any day during the tax year) more than 2% of the corporation's stock or stock with more than 2% of the voting power. Treat a 2% shareholder as you would a partner in a partnership for fringe benefit purposes, but don't treat the benefit as a reduction in distributions to the 2% shareholder. For more information, see Revenue Ruling 91-26, 1991-1 C.B. 184.

No-Additional-Cost Services

This exclusion applies to a service you provide to an employee if it doesn't cause you to incur any substantial additional costs. The service must be offered to customers in the ordinary course of the line of business in which the employee performs substantial services.

No-additional-cost services are excess capacity services, such as airline, bus, or train tickets; hotel rooms; or telephone services provided free, at a reduced price, or through a cash rebate to employees working in those lines of business. Services that aren't eligible for treatment as no-additional-cost services are non-excess capacity services, such as the facilitation by a stock brokerage firm of the purchase of stock by employees. These services may, however, be eligible for a qualified employee discount of up to 20% of the value of the service provided. See *Employee Discounts*, earlier.

Substantial additional costs.

To determine whether you incur substantial additional costs to provide a service to an employee, count any lost revenue as a cost. Don't reduce the costs you incur by any amount the employee pays for the service. You're considered to incur substantial additional costs if you or your employees spend a substantial amount of time in providing the service, even if the time spent would otherwise be idle or if the services are provided outside normal business hours.

Example.

A commercial airline allows its employees to take personal flights on the airline at no charge and receive reserved seating. Because the employer gives up potential revenue by allowing the employees to reserve seats, employees receiving such free flights aren't eligible for the no-additional-cost exclusion.

Reciprocal agreements.

A no-additional-cost service provided to your employee by an unrelated employer may qualify as a no-additional-cost service if all the following tests are met.

- The service is the same type of service generally provided to customers in both the line of business in which the employee works and the line of business in which the service is provided.

- You and the employer providing the service have a written reciprocal agreement under which a group of employees of each employer, all of whom perform substantial services in the same line of business, may receive no-additional-cost services from the other employer.

- Neither you nor the other employer incurs any substantial additional cost (including lost revenue) either in providing the service or because of the written agreement.

Employee.

For this exclusion, treat the following individuals as employees.

1. A current employee.

2. A former employee who retired or left on disability.

3. A surviving spouse of an individual who died while an employee.

4. A surviving spouse of a former employee who retired or left on disability.

5. A leased employee who has provided services to you on a substantially full-time basis for at least a year if the services are performed under your primary direction or control.

6. A partner who performs services for a partnership.

Treat services you provide to the spouse or dependent child of an employee as provided to the employee. For this fringe benefit, dependent

child is a child or stepchild who is the employee's dependent or who, if both parents are deceased, hasn't attained the age of 25. Treat a child of divorced parents as a dependent of both parents.

Treat any use of air transportation by the parent of an employee as use by the employee. This rule doesn't apply to use by the parent of a person considered an employee because of item (3) or (4) above.

Exclusion from wages.

You can generally exclude the value of a no-additional-cost service you provide to an employee from the employee's wages.

Exception for highly compensated employees.

You can't exclude from the wages of a highly compensated employee the value of a no-additional-cost service that isn't available on the same terms to one of the following groups.

- All of your employees.

- A group of employees defined under a reasonable classification you set up that doesn't favor highly compensated employees.

For this exclusion, a highly compensated employee for 2025 is an employee who meets either of the following tests.

1. The employee was a 5% owner at any time during the year or the preceding year.

2. The employee received more than $155,000 in pay for the preceding year.

You can choose to ignore test (2) if the employee wasn't also in the top 20% of employees when ranked by pay for the preceding year.

Retirement Planning Services

You may exclude from an employee's wages the value of any retirement planning advice or information you provide to your employee or their spouse if you maintain a qualified retirement plan. A qualified retirement plan includes a plan, contract, pension, or account described in section 219(g)(5) of the Internal Revenue Code. In addition to employer plan advice and information, the services provided may include general advice and information on retirement. However, the exclusion doesn't apply to services for tax preparation, accounting, legal, or brokerage services. You can't exclude from the wages of a highly compensated employee retirement planning services that aren't available on the same terms to each member of a group of employees normally provided education and information about the employer's qualified retirement plan.

Transportation (Commuting) Benefits

This section discusses exclusion rules that apply to benefits you provide to your employees for their personal transportation, such as commuting to and from work. These rules apply to the following transportation benefits.

- De minimis transportation benefits.

- Qualified transportation benefits.

Special rules that apply to demonstrator cars and qualified nonpersonal use vehicles are discussed under *Working Condition Benefits*, later in this section.

De Minimis Transportation Benefits

You can exclude the value of any de minimis transportation benefit you provide to an employee from the employee's wages. A de minimis transportation benefit is any local transportation benefit you provide to an employee if it has so little value (taking into account how frequently you provide transportation to your employees) that accounting for it would be unreasonable or administratively impracticable. For example, it applies to occasional local transportation fare you give an employee because the employee is working overtime if the benefit is reasonable and isn't based

on hours worked. Local transportation fare provided on a regular or routine basis doesn't qualify for this exclusion.

A special rule allows you to exclude as a de minimis benefit public transit passes, tokens, or fare cards you provide at a discount to defray your employee's commuting costs on the public transit system if the discount doesn't exceed $21 in any month. Similarly, you may also provide a voucher or similar instrument that is exchangeable solely for tokens, fare cards, or other instruments that enable your employee to use the public transit system if the value of the vouchers and other instruments in any month doesn't exceed $21. You may also reimburse your employee to cover the cost of commuting on a public transit system, provided your employee doesn't receive more than $21 in reimbursements for commuting costs in any month. The reimbursement must be made under a bona fide reimbursement arrangement, where you establish appropriate procedures for verifying on a periodic basis that your employee's use of public transportation for commuting is consistent with the value of the benefit provided. The exclusion doesn't apply to the provision of any benefit to defray public transit expenses incurred for personal travel other than commuting.

Employee.

For this exclusion, treat any recipient of a de minimis transportation benefit as an employee.

Qualified Transportation Benefits

This exclusion applies to the following benefits.

- A ride in a commuter highway vehicle between the employee's home and work place.

- A transit pass.

- Qualified parking.

You may provide an employee with any one or more of these benefits at the same time.

Qualified transportation benefits can be provided directly by you or through a bona fide reimbursement arrangement. A bona fide reimbursement arrangement requires that the employee incur and substantiate expenses for qualified transportation benefits before reimbursement. However, cash reimbursements for transit passes qualify only if a voucher or a similar item that the employee can exchange only for a transit pass isn't readily available for direct distribution by you to your employee. A voucher is readily available for direct distribution only if an employer can obtain it from a voucher provider that doesn't impose fare media charges or other restrictions that effectively prevent the employer from obtaining vouchers. See Regulations section 1.132-9(b)(Q&A 16–19) for more information.

Compensation reduction agreements.

A compensation reduction agreement is a way to provide qualified transportation benefits on a pre-tax basis by offering your employees a choice between cash compensation and any qualified transportation benefit. A compensation reduction arrangement can be used with a bona fide reimbursement arrangement. For each month, the amount of the compensation reduction can't exceed the monthly limits for transportation benefits described under *Exclusion from wages*, later. For more information about providing qualified transportation fringe benefits under a compensation reduction agreement, see Regulations section 1.132-9(b)(Q&A 11–15).

Commuter highway vehicle.

A commuter highway vehicle is any highway vehicle that seats at least six adults (not including the driver). In addition, you must reasonably expect that at least 80% of the vehicle mileage will be for transporting employees

between their homes and workplace with employees occupying at least one-half the vehicle's seats (not including the driver's).

Transit pass.

A transit pass is any pass, token, farecard, voucher, or similar item entitling a person to ride, free of charge or at a reduced rate, on one of the following.

- Mass transit.

- In a vehicle that seats at least six adults (not including the driver) if a person in the business of transporting persons for pay or hire operates it.

Mass transit may be publicly or privately operated and includes bus, rail, or ferry. For guidance on the use of smart cards and debit cards to provide qualified transportation fringes, see Revenue Ruling 2014-32, 2014-50 I.R.B. 917, available at IRS.gov/irb/2014-50_IRB#RR-2014-32.

Qualified parking.

Qualified parking is parking you provide to your employees on or near your business premises. It includes parking on or near the location from which your employees commute to work using mass transit, commuter highway vehicles, or carpools. It doesn't include parking at or near your employee's home.

 Qualified bicycle commuting reimbursement suspended. Section 11047 of P.L. 115-97 suspends the exclusion of qualified bicycle commuting reimbursements from your employee's income for any tax year beginning after 2017 and before 2026..

Employee.

For this exclusion, treat the following individuals as employees.

- A current employee.

- A leased employee who has provided services to you on a substantially full-time basis for at least a year if the services are performed under your primary direction or control.

A self-employed individual isn't an employee for qualified transportation benefit purposes.

Exception for S corporation shareholders.

Don't treat a 2% shareholder of an S corporation as an employee of the corporation for this purpose. A 2% shareholder is someone who directly or indirectly owns (for any day during the tax year) more than 2% of the corporation's stock or stock with more than 2% of the voting power. Treat a 2% shareholder as you would a partner in a partnership for fringe benefit purposes, but don't treat the benefit as a reduction in distributions to the 2% shareholder. For more information, see Revenue Ruling 91-26, 1991-1 C.B. 184.

Relation to other fringe benefits.

You can't exclude a qualified transportation benefit you provide to an employee under the de minimis or working condition benefit rules. However, if you provide a local transportation benefit other than by transit pass or commuter highway vehicle, or to a person other than an employee, you may be able to exclude all or part of the benefit under other fringe benefit rules (de minimis, working condition, etc.).

Exclusion from wages.

You can generally exclude the value of transportation benefits that you provide to an employee during 2025 from the employee's wages up to the following limits.

- $325 per month for combined commuter highway vehicle transportation and transit passes.

- $325 per month for qualified parking.

Benefits more than the limit.

If the value of a benefit for any month is more than its limit, include in the employee's wages the amount over the limit minus any amount the employee paid for the benefit. You can't exclude the excess from the employee's wages as a de minimis transportation benefit.

 Qualified transportation benefits aren't deductible. *Sections 274(a)(4) and 274(l) provide that no deduction is allowed for qualified transportation benefits (whether provided directly by you, through a bona fide reimbursement arrangement, or through a compensation reduction agreement) incurred or paid after 2017. Also, no deduction is allowed for any expense incurred for providing any transportation, or any payment or reimbursement to your employee, in connection with travel between your employee's residence and place of employment, except as necessary for ensuring the safety of your employee or for qualified bicycle commuting reimbursements, as described in section 132(f)(5)(F) (even though the exclusion for qualified bicycle commuting reimbursements is suspended, as discussed earlier). While you may no longer deduct payments for qualified transportation benefits, the fringe benefit exclusion rules still apply and the payments may be excluded from your employee's wages, as discussed earlier. Although the value of a qualified transportation fringe benefit is relevant in determining the fringe benefit exclusion and whether the section 274(e)(2) exception for expenses treated as compensation applies, the deduction that is disallowed relates to the expense of providing a qualified*

transportation fringe, not its value. For more information, see Regulations sections 1.274-13 and 1.274-14..

More information.

For more information on qualified transportation benefits, including van pools, and how to determine the value of parking, see Regulations section 1.132-9.

Tuition Reduction

An eligible educational institution can exclude the value of a qualified tuition reduction it provides to an employee from the employee's wages.

A tuition reduction for undergraduate education generally qualifies for this exclusion if it is for the education of one of the following individuals.

1. A current employee.

2. A former employee who retired or left on disability.

3. A surviving spouse of an individual who died while an employee.

4. A surviving spouse of a former employee who retired or left on disability.

5. A dependent child or spouse of any individual listed in (1) through (4) above.

A tuition reduction for graduate education qualifies for this exclusion only if it is for the education of a graduate student who performs teaching or research activities for the eligible educational institutions.

For more information on this exclusion, see *Qualified Tuition Reduction* under *Other Types of Educational Assistance* in chapter 1 of Pub. 970.

Working Condition Benefits

This exclusion applies to property and services you provide to an employee so that the employee can perform their job. It applies to the extent the cost

of the property or services would be allowable as a business expense or depreciation expense deduction to the employee if they had paid for it. The employee must meet any substantiation requirements that apply to the deduction. Examples of working condition benefits include an employee's use of a company car for business, an [employer-provided cell phone](#) provided primarily for noncompensatory business purposes (discussed earlier), and job-related education provided to an employee.

This exclusion also applies to a cash payment you provide for an employee's expenses for a specific or prearranged business activity if such expenses would otherwise be allowable as a business expense or depreciation expense deduction to the employee. You must require the employee to verify that the payment is actually used for those expenses and to return any unused part of the payment.

The exclusion doesn't apply to the following items.

- A service or property provided under a flexible spending account in which you agree to provide the employee, over a time period, a certain level of unspecified noncash benefits with a predetermined cash value.

- A physical examination program you provide, even if mandatory.

- Any item to the extent the payment would be allowable as a deduction to the employee as an expense for a trade or business other than your trade or business. For more information, see Regulations section 1.132-5(a)(2).

Employee.

For this exclusion, treat the following individuals as employees.

- A current employee.

- A partner who performs services for a partnership.

- A director of your company.

- An independent contractor who performs services for you.

Vehicle allocation rules.

If you provide a car for an employee's use, the amount you can exclude as a working condition benefit is the amount that would be allowable as a deductible business expense if the employee paid for its use. If the employee uses the car for both business and personal use, the value of the working condition benefit is the part determined to be for business use of the vehicle. See *Business use of your car* next. Also, see the special rules for certain demonstrator cars and qualified nonpersonal use vehicles discussed later.

Business use of your car.

If you use your car exclusively in your business, you can deduct car expenses. If you use your car for both business and personal purposes, you must divide your expenses based on actual mileage. Generally, commuting expenses between your home and your business location, within the area of your tax home, are not deductible.

You can deduct actual car expenses, which include depreciation (or lease payments), gas and oil, tires, repairs, tune-ups, insurance, and registration fees. Or, instead of figuring the business part of these actual expenses, you may be able to use the standard mileage rate to figure your deduction. To find the standard mileage rate for 2025 and prior years, go to IRS.gov/Tax-Professionals/ Standard-Mileage-Rates.

If you are self-employed, you can also deduct the business part of interest on your car loan, state and local personal property tax on the car, parking fees, and tolls, whether or not you claim the standard mileage rate.

For more information on car expenses and the rules for using the standard mileage rate, see Pub. 463.

Demonstrator cars.

Generally, all of the use of a demonstrator car by your full-time auto salesperson in the sales area in which your sales office is located qualifies as a working condition benefit if the use is primarily to facilitate the services the salesperson provides for you and there are substantial restrictions on personal use. For more information and the definition of "full-time auto salesperson," see Regulations section 1.132-5(o). For optional, simplified methods used to determine if full, partial, or no exclusion of income to the employee for personal use of a demonstrator car applies, see Revenue Procedure 2001-56. You can find Revenue Procedure 2001-56 on page 590 of Internal Revenue Bulletin 2001-51 at IRS.gov/pub/irs-irbs/irb01-51.pdf.

Qualified nonpersonal use vehicles.

All of an employee's use of a qualified nonpersonal use vehicle is a working condition benefit. A qualified nonpersonal use vehicle is any vehicle the employee isn't likely to use more than minimally for personal purposes because of its design. Qualified nonpersonal use vehicles generally include all of the following vehicles.

- Clearly marked, through painted insignia or words, police, fire, and public safety vehicles, provided that any personal use of the vehicle (other than commuting) is prohibited by the governmental unit.

- Unmarked vehicles used by law enforcement officers if the use is officially authorized. Any personal use must be authorized by the employer, and must be related to law-enforcement functions, such as being able to report directly from home to an emergency situation. Use of an unmarked vehicle for vacation or recreation trips can't qualify as an authorized use.

- An ambulance or hearse used for its specific purpose.

- Any vehicle designed to carry cargo with a loaded gross vehicle weight over 14,000 pounds.

- Delivery trucks with seating for the driver only, or the driver plus a folding jump seat.

- A passenger bus with a capacity of at least 20 passengers used for its specific purpose and school buses. The working condition benefit is available only for the driver, not for any passengers.

- Tractors and other special-purpose farm vehicles.

- Bucket trucks, cement mixers, combines, cranes and derricks, dump trucks (including garbage trucks), flatbed trucks, forklifts, qualified moving vans, qualified specialized utility repair trucks, and refrigerated trucks.

See Regulations section 1.274-5(k) for the definition of qualified moving van and qualified specialized utility repair truck.

Pickup trucks.

A pickup truck with a loaded gross vehicle weight of 14,000 pounds or less is a qualified nonpersonal use vehicle if it has been specially modified so it isn't likely to be used more than minimally for personal purposes. For example, a pickup truck qualifies if it is clearly marked with permanently affixed decals, special painting, or other advertising associated with your trade, business, or function and meets either of the following requirements.

1. It is equipped with at least one of the following items.

   a. A hydraulic lift gate.

   b. Permanent tanks or drums.

   c. Permanent side boards or panels that materially raise the level of the sides of the truck bed.

   d. Other heavy equipment (such as an electric generator, welder, boom, or crane used to tow automobiles and other vehicles).

2. It is used primarily to transport a particular type of load (other than over the public highways) in a construction, manufacturing,

processing, farming, mining, drilling, timbering, or other similar operation for which it was specially designed or significantly modified.

Vans.

A van with a loaded gross vehicle weight of 14,000 pounds or less is a qualified nonpersonal use vehicle if it has been specially modified so it isn't likely to be used more than minimally for personal purposes. For example, a van qualifies if it is clearly marked with permanently affixed decals, special painting, or other advertising associated with your trade, business, or function and has a seat for the driver only (or the driver and one other person) and either of the following items.

- Permanent shelving that fills most of the cargo area.

- An open cargo area and the van always carries merchandise, material, or equipment used in your trade, business, or function.

Education.

Certain job-related education you provide to an employee may qualify for exclusion as a working condition benefit. To qualify, the education must meet the same requirements that would apply for determining whether the employee could deduct the expenses had the employee paid the expenses. Degree programs as a whole don't necessarily qualify as a working condition benefit. Each course in the program must be evaluated individually for qualification as a working condition benefit. The education must meet at least one of the following tests.

- The education is required by the employer or by law for the employee to keep their present salary, status, or job. The required education must serve a bona fide business purpose of the employer.

- The education maintains or improves skills needed in the job.

However, even if the education meets one or both of the above tests, it isn't qualifying education if it:

- Is needed to meet the minimum educational requirements of the employee's present trade or business, or

- Is part of a program of study that will qualify the employee for a new trade or business.

Outplacement services.

An employee's use of outplacement services qualifies as a working condition benefit if you provide the services to the employee on the basis of need, you get a substantial business benefit from the services distinct from the benefit you would get from the payment of additional wages, and the employee is seeking new employment in the same kind of trade or business in which the employee is presently working. Substantial business benefits include promoting a positive business image, maintaining employee morale, and avoiding wrongful termination suits.

Outplacement services don't qualify as a working condition benefit if the employee can choose to receive cash or taxable benefits in place of the services. If you maintain a severance plan and permit employees to get outplacement services with reduced severance pay, include in the employee's wages the difference between the unreduced severance and the reduced severance payments.

Product testing.

The FMV of the use of consumer goods, which are manufactured for sale to nonemployees, for product testing and evaluation by your employee outside your workplace, qualifies as a working condition benefit if all of the following conditions are met.

- Consumer testing and evaluation of the product is an ordinary and necessary business expense for you.

- Business reasons necessitate that the testing and evaluation must be performed off your business premises. For example, the testing and

evaluation can't be carried out adequately in your office or in laboratory testing facilities.

- You provide the product to your employee for purposes of testing and evaluation.

- You provide the product to your employee for no longer than necessary to test and evaluate its performance, and (to the extent not finished) the product must be returned to you at completion of the testing and evaluation period.

- You impose limitations on your employee's use of the product that significantly reduce the value of any personal benefit to your employee. This includes limiting your employee's ability to select among different models or varieties of the consumer product, and prohibiting the use of the product by persons other than your employee.

- Your employee submits detailed reports to you on the testing and evaluation.

The program won't qualify if you don't use and examine the results of the detailed reports submitted by employees within a reasonable period of time after expiration of the testing period. Additionally, existence of one or more of the following factors may also establish that the program isn't a bona fide product-testing program.

- The program is in essence a leasing program under which employees lease the consumer goods from you for a fee.

- The nature of the product and other considerations are insufficient to justify the testing program.

- The expense of the program outweighs the benefits to be gained from testing and evaluation.

The program must also not be limited to only certain classes of employees (such as highly compensated employees), unless you can show a business reason for providing the products only to specific employees. For example, an automobile manufacturer may limit providing automobiles for testing and

evaluation to only their design engineers and supervisory mechanics, as they can properly evaluate the automobiles.

Exclusion from wages.

You can generally exclude the value of a working condition benefit you provide to an employee from the employee's wages.

Exception for independent contractors who perform services for you.

You can't exclude the use of consumer goods you provide in a product-testing program from the compensation you pay to an independent contractor. You can't exclude the value of parking as a working condition benefit, but you may be able to exclude it as a de minimis fringe benefit. Transit passes provided to independent contractors may be excluded as a working condition benefit if they meet the requirements of a working condition benefit described earlier. However, personal commuting expenses aren't deductible as a business expense. Transit passes may also be excluded as a de minimis fringe benefit. For more information on de minimis transportation benefits, see *De Minimis Transportation Benefits*, earlier in this section.

Exception for company directors.

You can't exclude the value of the use of consumer goods you provide in a product-testing program from the compensation you pay to a director.

3. Fringe Benefit Valuation Rules

This section discusses the rules you must use to determine the value of a fringe benefit you provide to an employee. You must determine the value of any benefit you can't exclude under the rules in section 2 or for which the amount you can exclude is limited. See *Including taxable benefits in pay* in section 1.

In most cases, you must use the general valuation rule to value a fringe benefit. However, you may be able to use a special valuation rule to determine the value of certain benefits.

This section doesn't discuss the special valuation rule used to value meals provided at an employer-operated eating facility for employees. For that rule, see Regulations section 1.61-21(j).

General Valuation Rule

You must use the general valuation rule to determine the value of most fringe benefits. Under this rule, the value of a fringe benefit is its FMV.

FMV.

The FMV of a fringe benefit is the amount an employee would have to pay a third party in an arm's-length transaction to buy or lease the benefit. Determine this amount on the basis of all the facts and circumstances.

Neither the amount the employee considers to be the value of the fringe benefit nor the cost you incur to provide the benefit determines its FMV.

Business aircraft.

Personal use of a company aircraft by an employee or their guests is a taxable fringe benefit. The term "employee" includes any person performing services in connection with which the fringe benefit flight was provided, and may include, for example, a partner, director, or independent contractor. The employee, not the guest, will be subject to a non-cash fringe benefit inclusion, typically as part of their W-2 wages for an employee, a guaranteed payment on Schedule K-1 (Form 1065) for a partner in a partnership, or Form 1099-NEC for any other non-employee arrangement.

There are two methods for valuing personal flights on company aircraft:

1. Fair Charter Value (FCV)–This is the hourly rate that would be paid to charter a similar piloted aircraft from an unrelated party.

2. Standard Industry Fare Level (SIFL)–SIFL rates are calculated using a formula published in Regulations section 1.61-21(g). SIFL may only be used on an originally filed return. The Department of Transportation publishes the SIFL rates biannually.

Employer-provided vehicles.

In general, the FMV of an employer-provided vehicle is the amount the employee would have to pay a third party to lease the same or similar vehicle on the same or comparable terms in the geographic area where the employee uses the vehicle. A comparable lease term would be the amount of time the vehicle is available for the employee's use, such as a 1-year period.

Don't determine the FMV by multiplying a cents-per-mile rate times the number of miles driven unless the employee can prove the vehicle could have been leased on a cents-per-mile basis.

Cents-Per-Mile Rule

Under this rule, you determine the value of a vehicle you provide to an employee for personal use by multiplying the standard mileage rate by the total miles the employee drives the vehicle for personal purposes. Personal use is any use of the vehicle other than use in your trade or business. This amount must be included in the employee's wages or reimbursed by the employee. For 2025, the standard mileage rate is 70 cents per mile.

You can use the cents-per-mile rule if either of the following requirements is met.

- You reasonably expect the vehicle to be regularly used in your trade or business throughout the calendar year (or for a shorter period during which you own or lease it).

- The vehicle meets the mileage test.

Maximum automobile value. *You can't use the cents-per-mile rule for an automobile (including a truck or van) if its value when you first make it available to any employee for personal use in calendar year 2025 is more than $61,200. For guidance related to the impact of P.L. 115-97 on this rule, see Treasury Decision 9893, 2020-09 I.R.B. 449, available at IRS.gov/irb/2020-09_IRB#TD-9893. If you and the employee own or lease the automobile together, see Regulations sections 1.61-21(e)(1)(iii)(B) and (C)..*

Vehicle.

For the cents-per-mile rule, a vehicle is any motorized wheeled vehicle, including an automobile, manufactured primarily for use on public streets, roads, and highways.

Regular use in your trade or business.

Whether a vehicle is regularly used in your trade or business is determined on the basis of all facts and circumstances. A vehicle is considered regularly used in your trade or business if one of the following safe harbor conditions is met.

- At least 50% of the vehicle's total annual mileage is for your trade or business.

- You sponsor a commuting pool that generally uses the vehicle each workday to drive at least three employees to and from work.

Infrequent business use of the vehicle, such as for occasional trips to the airport or between your multiple business premises, isn't regular use of the vehicle in your trade or business.

Mileage test.

A vehicle meets the mileage test for a calendar year if both of the following requirements are met.

- The vehicle is actually driven at least 10,000 miles during the year. If you own or lease the vehicle only part of the year, reduce the 10,000-mile requirement proportionately.

- The vehicle is used during the year primarily by employees. Consider the vehicle used primarily by employees if they use it consistently for commuting. Don't treat the use of the vehicle by another individual whose use would be taxed to the employee as use by the employee.

For example, if only one employee uses a vehicle during the calendar year and that employee drives the vehicle at least 10,000 miles in that year, the vehicle meets the mileage test even if all miles driven by the employee are personal.

Consistency requirements.

If you use the cents-per-mile rule, the following requirements apply.

- You must begin using the cents-per-mile rule on the first day you make the vehicle available to any employee for personal use. However, if you use the commuting rule (discussed later) when you first make the vehicle available to any employee for personal use, you can change to the cents-per-mile rule on the first day for which you don't use the commuting rule.

- You must use the cents-per-mile rule for all later years in which you make the vehicle available to any employee and the vehicle qualifies, except that you can use the commuting rule for any year during which use of the vehicle qualifies under the commuting rule. However, if the vehicle doesn't qualify for the cents-per-mile rule during a later year, you can use for that year and thereafter any other rule for which the vehicle then qualifies.

- You must continue to use the cents-per-mile rule if you provide a replacement vehicle to the employee (and the vehicle qualifies for the

use of this rule) and your primary reason for the replacement is to reduce federal taxes.

Items included in cents-per-mile rate.

The cents-per-mile rate includes the value of maintenance and insurance for the vehicle. Don't reduce the rate by the value of any service included in the rate that you didn't provide. You can take into account the services actually provided for the vehicle by using the general valuation rule, earlier.

For miles driven in the United States, its territories, Canada, and Mexico, the cents-per-mile rate includes the value of fuel you provide. If you don't provide fuel, you can reduce the rate by no more than 5.5 cents.

For special rules that apply to fuel you provide for miles driven outside the United States, Canada, and Mexico, see Regulations section 1.61-21(e)(3)(ii)(B).

The value of any other service you provide for a vehicle isn't included in the cents-per-mile rate. Use the general valuation rule to value these services.

Commuting Rule

Under this rule, you determine the value of a vehicle you provide to an employee for commuting use by multiplying each one-way commute (that is, from home to work or from work to home) by $1.50. If more than one employee commutes in the vehicle, this value applies to each employee. This amount must be included in the employee's wages or reimbursed by the employee.

You can use the commuting rule if all the following requirements are met.

- You provide the vehicle to an employee for use in your trade or business and, for bona fide noncompensatory business reasons, you require the employee to commute in the vehicle. You will be treated as if you had met this requirement if the vehicle is generally used each workday to carry at least three employees to and from work in an employer-sponsored commuting pool.

- You establish a written policy under which you don't allow the employee, nor any individual whose use would be taxable to the employee, to use the vehicle for personal purposes other than for commuting or de minimis personal use (such as a stop for a personal errand on the way between a business delivery and the employee's home). Personal use of a vehicle is all use that isn't for your trade or business.

- The employee doesn't use the vehicle for personal purposes other than commuting and de minimis personal use.

- If this vehicle is an automobile (any four-wheeled vehicle, such as a car, pickup truck, or van), the employee who uses it for commuting isn't a control employee. See *Control employee*, later.

Vehicle.

For this rule, a vehicle is any motorized wheeled vehicle (including an automobile) manufactured primarily for use on public streets, roads, and highways.

Control employee.

A control employee of a nongovernment employer for 2025 is generally any of the following employees.

- A board- or shareholder-appointed, confirmed, or elected officer whose pay is $140,000 or more.

- A director.

- An employee whose pay is $285,000 or more.

- An employee who owns a 1% or more equity, capital, or profits interest in your business.

A control employee for a government employer for 2025 is either of the following.

- A government employee whose compensation is equal to or exceeds Federal Government Executive Level V. Go to the Office of Personnel Management website at OPM.gov/policy-data-oversight/pay-leave/salaries-wages for 2025 compensation information.

- An elected official.

Highly compensated employee alternative.

Instead of using the preceding definition, you can choose to define a control employee as any highly compensated employee. A highly compensated employee for 2025 is an employee who meets either of the following tests.

1. The employee was a 5% owner at any time during the year or the preceding year.

2. The employee received more than $155,000 in pay for the preceding year.

You can choose to ignore test (2) if the employee wasn't also in the top 20% of employees when ranked by pay for the preceding year.

Lease Value Rule

Under this rule, you determine the value of an automobile you provide to an employee by using its annual lease value. For an automobile provided only part of the year, use either its prorated annual lease value or its daily lease value (discussed later).

If the automobile is used by the employee in your business, you generally reduce the lease value by the amount that is excluded from the employee's wages as a working condition benefit (discussed earlier in section 2). In order to do this, the employee must account to the employer for the business use. This is done by substantiating the usage (mileage, for example), the time and place of the travel, and the business purpose of the travel. Written records made at the time of each business use are the best evidence. Any use of a company-provided vehicle that isn't substantiated

as business use is included in income. The working condition benefit is the amount that would be an allowable business expense deduction for the employee if the employee paid for the use of the vehicle.

Automobile.

For this rule, an automobile is any four-wheeled vehicle (such as a car, pickup truck, or van) manufactured primarily for use on public streets, roads, and highways.

Consistency requirements.

If you use the lease value rule, the following requirements apply.

1. You must begin using this rule on the first day you make the automobile available to any employee for personal use. However, the following exceptions apply.

    a. If you use the commuting rule (discussed earlier in this section) when you first make the automobile available to any employee for personal use, you can change to the lease value rule on the first day for which you don't use the commuting rule.

    b. If you use the cents-per-mile rule (discussed earlier in this section) when you first make the automobile available to any employee for personal use, you can change to the lease value rule on the first day on which the automobile no longer qualifies for the cents-per-mile rule.

2. You must use this rule for all later years in which you make the automobile available to any employee, except that you can use the commuting rule for any year during which use of the automobile qualifies.

3. You must continue to use this rule if you provide a replacement automobile to the employee and your primary reason for the replacement is to reduce federal taxes.

Annual Lease Value

Generally, you figure the annual lease value of an automobile as follows.

1. Determine the FMV of the automobile on the first date it is available to any employee for personal use.

2. Using Table 3-1, read down column (1) until you come to the dollar range within which the FMV of the automobile falls. Then read across to column (2) to find the annual lease value.

3. Multiply the annual lease value by the percentage of personal miles out of total miles driven by the employee.

Table 3-1. Annual Lease Value Table

(1) Automobile FMV	(2) Annual Lease Value
$ 0 to 999	$ 600
1,000 to 1,999	850
2,000 to 2,999	1,100
3,000 to 3,999	1,350
4,000 to 4,999	1,600
5,000 to 5,999	1,850
6,000 to 6,999	2,100
7,000 to 7,999	2,350
8,000 to 8,999	2,600
9,000 to 9,999	2,850
10,000 to 10,999	3,100
11,000 to 11,999	3,350
12,000 to 12,999	3,600

(1) Automobile FMV	(2) Annual Lease Value
13,000 to 13,999	3,850
14,000 to 14,999	4,100
15,000 to 15,999	4,350
16,000 to 16,999	4,600
17,000 to 17,999	4,850
18,000 to 18,999	5,100
19,000 to 19,999	5,350
20,000 to 20,999	5,600
21,000 to 21,999	5,850
22,000 to 22,999	6,100
23,000 to 23,999	6,350
24,000 to 24,999	6,600
25,000 to 25,999	6,850
26,000 to 27,999	7,250
28,000 to 29,999	7,750
30,000 to 31,999	8,250
32,000 to 33,999	8,750
34,000 to 35,999	9,250
36,000 to 37,999	9,750
38,000 to 39,999	10,250
40,000 to 41,999	10,750
42,000 to 43,999	11,250

(1) Automobile FMV	(2) Annual Lease Value
44,000 to 45,999	11,750
46,000 to 47,999	12,250
48,000 to 49,999	12,750
50,000 to 51,999	13,250
52,000 to 53,999	13,750
54,000 to 55,999	14,250
56,000 to 57,999	14,750
58,000 to 59,999	15,250

For automobiles with an FMV of more than $59,999, the annual lease value equals (0.25 × the FMV of the automobile) + $500.

FMV.

The FMV of an automobile is the amount a person would pay to buy it from a third party in an arm's-length transaction in the area in which the automobile is bought or leased. That amount includes all purchase expenses, such as sales tax and title fees.

If you have 20 or more automobiles, see Regulations section 1.61-21(d)(5)(v). If you and the employee own or lease the automobile together, see Regulations section 1.61-21(d)(2)(ii).

You don't have to include the value of a telephone or any specialized equipment added to, or carried in, the automobile if the equipment is necessary for your business. However, include the value of specialized equipment if the employee to whom the automobile is available uses the specialized equipment in a trade or business other than yours.

Neither the amount the employee considers to be the value of the benefit nor your cost for either buying or leasing the automobile determines its FMV. However, see *Safe-harbor value* next.

Safe-harbor value.

You may be able to use a safe-harbor value as the FMV.

For an automobile you bought at arm's length, the safe-harbor value is your cost, including sales tax, title, and other purchase expenses. This method isn't available for an automobile you manufactured.

For an automobile you lease, you can use any of the following as the safe-harbor value.

- The manufacturer's invoice price (including options) plus 4%.

- The manufacturer's suggested retail price minus 8% (including sales tax, title, and other expenses of purchase).

- The retail value of the automobile reported by a nationally recognized pricing source if that retail value is reasonable for the automobile.

Items included in annual lease value table.

Each annual lease value in the table includes the value of maintenance and insurance for the automobile. Don't reduce the annual lease value by the value of any of these services that you didn't provide. For example, don't reduce the annual lease value by the value of a maintenance service contract or insurance you didn't provide. You can take into account the services actually provided for the automobile by using the general valuation rule discussed earlier.

Items not included.

The annual lease value doesn't include the value of fuel you provide to an employee for personal use, regardless of whether you provide it, reimburse its cost, or have it charged to you. You must include the value of the fuel separately in the employee's wages. You can value fuel you provided at FMV or at 5.5 cents per mile for all miles driven by the employee. However, you can't value at 5.5 cents per mile fuel you provide for miles driven outside the United States (including its territories), Canada, and Mexico.

If you reimburse an employee for the cost of fuel, or have it charged to you, you generally value the fuel at the amount you reimburse, or the amount charged to you if it was bought at arm's length.

If you have 20 or more automobiles, see Regulations section 1.61-21(d)(3)(ii)(D).

If you provide any service other than maintenance and insurance for an automobile, you must add the FMV of that service to the annual lease value of the automobile to figure the value of the benefit.

Four-year lease term.

The annual lease values in the table are based on a 4-year lease term. These values will generally stay the same for the period that begins with the first date you use this rule for the automobile and ends on December 31 of the fourth full calendar year following that date.

Figure the annual lease value for each later 4-year period by determining the FMV of the automobile on January 1 of the first year of the later 4-year period and selecting the amount in column (2) of the table that corresponds to the appropriate dollar range in column (1).

Using the special accounting rule.

If you use the special accounting rule for fringe benefits discussed in section 4, you can figure the annual lease value for each later 4-year period

at the beginning of the special accounting period that starts immediately before the January 1 date described in the previous paragraph.

For example, assume that you use the special accounting rule and that, beginning on November 1, 2024, the special accounting period is November 1 to October 31. You elected to use the lease value rule as of January 1, 2025. You can refigure the annual lease value on November 1, 2028, rather than on January 1, 2029.

Transferring an automobile from one employee to another.

Unless the primary purpose of the transfer is to reduce federal taxes, you can refigure the annual lease value based on the FMV of the automobile on January 1 of the calendar year of transfer.

However, if you use the special accounting rule for fringe benefits discussed in section 4, you can refigure the annual lease value (based on the FMV of the automobile) at the beginning of the special accounting period in which the transfer occurs.

Prorated Annual Lease Value

If you provide an automobile to an employee for a continuous period of 30 or more days but less than an entire calendar year, you can prorate the annual lease value. Figure the prorated annual lease value by multiplying the annual lease value by a fraction, using the number of days of availability as the numerator and 365 as the denominator.

If you provide an automobile continuously for at least 30 days, but the period covers 2 calendar years (or 2 special accounting periods if you're using the special accounting rule for fringe benefits discussed in section 4), you can use the prorated annual lease value or the daily lease value.

If you have 20 or more automobiles, see Regulations section 1.61-21(d)(6).

If an automobile is unavailable to the employee because of the employee's personal reasons (for example, if the employee is on vacation), you can't

take into account the periods of unavailability when you use a prorated annual lease value.

 You can't use a prorated annual lease value if the reduction of federal tax is the main reason the automobile is unavailable..

Daily Lease Value

If you provide an automobile to an employee for a continuous period of less than 30 days, use the daily lease value to figure its value. Figure the daily lease value by multiplying the annual lease value by a fraction, using four times the number of days of availability as the numerator and 365 as the denominator.

However, you can apply a prorated annual lease value for a period of continuous availability of less than 30 days by treating the automobile as if it had been available for 30 days. Use a prorated annual lease value if it would result in a lower valuation than applying the daily lease value to the shorter period of availability.

Unsafe Conditions Commuting Rule

Under this rule, the value of commuting transportation you provide to a qualified employee solely because of unsafe conditions is $1.50 for a one-way commute (that is, from home to work or from work to home). If more than one employee commutes in the vehicle, this value applies to each employee. This amount must be included in the employee's wages or reimbursed by the employee.

You can use the unsafe conditions commuting rule for qualified employees if all of the following requirements are met.

- The employee would ordinarily walk or use public transportation for commuting.

- You have a written policy under which you don't provide the transportation for personal purposes other than commuting because of unsafe conditions.

- The employee doesn't use the transportation for personal purposes other than commuting because of unsafe conditions.

These requirements must be met on a trip-by-trip basis.

Commuting transportation.

This is transportation to or from work using any motorized wheeled vehicle (including an automobile) manufactured for use on public streets, roads, and highways. You or the employee must buy the transportation from a party that isn't related to you. If the employee buys it, you must reimburse the employee for its cost (for example, cab fare) under a bona fide reimbursement arrangement.

Qualified employee.

A qualified employee for 2025 is one who:

- Performs services during the year;

- Is paid on an hourly basis;

- Isn't claimed under section 213(a)(1) of the Fair Labor Standards Act (FLSA) of 1938 (as amended) to be exempt from the minimum wage and maximum hour provisions;

- Is within a classification for which you actually pay, or have specified in writing that you will pay, overtime pay of at least one and one-half times the regular rate provided in section 207 of FLSA; and

- Received pay of not more than $155,000 during 2024.

However, an employee isn't considered a qualified employee if you don't comply with the recordkeeping requirements concerning the employee's wages, hours, and other conditions and practices of employment under section 211(c) of FLSA and the related regulations.

Unsafe conditions.

Unsafe conditions exist if, under the facts and circumstances, a reasonable person would consider it unsafe for the employee to walk or use public transportation at the time of day the employee must commute. One factor indicating whether it is unsafe is the history of crime in the geographic area surrounding the employee's workplace or home at the time of day the employee commutes.

Meal-Delivery Platforms: Multistate Sales Tax Practice Tips and Advisory Considerations

Determining the sales, use, excise, and other tax (collectively, transaction tax) obligations associated with the sale of a meal has always been a difficult endeavor. Historically, the transaction tax consequences of the sale of food and beverages have been fraught with uncertainties, resulting in different tax consequences applying to sales of seemingly similar items. One of the most notorious examples is the New York "sliced bagel tax," under which a whole bagel served without spread is exempt from state sales tax as a "grocery item," but a sliced bagel with cream cheese (or other spread) is subject to state sales tax as a "sandwich."[1] Numerous other examples abound, such as the nuances of whether an item is "prepared food" or a "food ingredient," or "food" versus a "nutritional supplement," or "prepared for immediate consumption" or otherwise–all of which can affect taxability in several states (with varying results).[2]

Given these nuances, correctly ascertaining the transaction taxes due on the sale of food and beverages is a highly complicated task for a dining establishment, even without the involvement of a third-party intermediary. When the transactions involve intermediary platforms that facilitate the purchase and delivery of meals to customers (referred to throughout this article as "meal-delivery platforms"), and that may be operated outside of

the state and have no direct control over the preparation and delivery of the food at issue, the ability to correctly determine the amount of transaction tax due becomes even more complex. In addition to the underlying taxability of the food and beverage items being sold, meal-delivery platforms must consider, among other things, whether a given state's marketplace facilitator platform law applies, whether any fees imposed by the platform are taxable, and whether special transaction taxes (including local taxes) apply. These and other issues are explored in this article, the third in a series from Checkpoint Catalyst on intermediary platforms, which draws from the author's experience in practice to highlight transaction tax considerations for meal-delivery platforms. The previous articles in this series offered tips and considerations for lodging intermediary platforms, rental car facilitators, and passenger transportation platforms.[3]As highlighted in the previous articles in this series, there is a marked lack of uniformity in the obligations that states impose on intermediary platforms, and meal-delivery platforms are no exception.

Obligations Under State Marketplace Facilitator Laws

Some states have asserted that meal-delivery platforms were required to collect and remit transaction tax even before the Supreme Court's 2018 *Wayfair* decision eliminated the physical presence nexus requirement–for example, the South Dakota Department of Revenue has taken the position that a meal-delivery platform establishes nexus through the physical presence of delivery personnel in the state[4]—but the obligations of remote platforms to potentially collect and remit transaction taxes expanded exponentially following *Wayfair* and the subsequent proliferation of state marketplace facilitator laws. As discussed in the earlier articles in this series, marketplace facilitator laws generally shift the transaction tax remittance obligation from the marketplace seller of the taxable good or service (*e.g.* , the restaurant preparing and selling the meal) to the platform that facilitates the sale of that good or service (*e.g.* , the meal-delivery platform).[5] Thus, at the outset, meal-delivery platforms should ascertain whether they are potentially subject to a state's marketplace facilitator law–a determination that may vary depending on the

meal-delivery platform's business model and the nuances of the marketplace facilitator law at hand.

Some states have directly addressed the applicability of their marketplace facilitator laws to meal-delivery platforms, with varying results. For example, effective April 1, 2020, Georgia law treats meal-ordering and other platforms as marketplace facilitators and requires them to collect and remit tax if the gross receipts from transactions they facilitate on behalf of third-party restaurants or meal providers equal or exceed $100,000 in the previous or current calendar year.[6] California, on the other hand, excludes "delivery network companies" from the marketplace facilitator provisions requiring collection and remittance of sales tax.[7] The California law defines delivery network companies to mean businesses that maintain an internet website or mobile application used to facilitate delivery services for the sale of local products, and thus would encompass meal-delivery platforms that facilitate the sale and delivery of meals from local restaurants.[8] In other states, such as Tennessee, a meal-delivery platform can elect to be treated as a marketplace facilitator.[9]

Furthermore, even in states that may not have addressed meal-delivery platforms outright, the statutory language that defines a marketplace facilitator often bears particular relevance for meal-delivery platforms. Namely, some states' facilitator laws require that a platform enter into a contractual arrangement with a marketplace seller in order for that platform to be considered a marketplace facilitator. For example, in Virginia, a marketplace facilitator is defined as "a person that contracts with a marketplace seller to facilitate, for consideration and regardless of whether such consideration is deducted as fees from transactions, the sale of such marketplace seller's products through a physical or electronic marketplace operated by such person."[10] However, in the author's experience, some meal-delivery platforms do not necessarily contract with every meal provider listed on the platforms. Rather, certain restaurants and other meal providers may be permitted to list their items on the platform without ever entering into a contractual arrangement with the platform itself. In those arrangements, the platform may not be considered a marketplace facilitator

in states that require contractual privity between the marketplace facilitator and the marketplace seller.

Other states do not require that any contractual arrangement exists between the platform and the marketplace seller for the law to be triggered. For example, in South Carolina, a marketplace facilitator is defined as "any person engaged in the business of facilitating a retail sale of tangible personal property by: (a) listing or advertising, or allowing the listing or advertising of, the products of another person in any marketplace where sales at retail occur; and (b) collecting or processing payments from the purchaser, either directly or indirectly through an agreement or arrangement with a third party."[11] Given the nuances in state laws, any determination on the issue of whether contractual privity between platform and seller is required to trigger obligations under a state's marketplace facilitator law requires a careful parsing of the state's statutory language, and may require further communications with the state's revenue department where the language is unclear.

Taxability of Meal-Delivery Platform Fees

Another issue that frequently arises for meal-delivery platforms is the taxability of the fee(s) charged by the platform. While fee structures vary among meal-delivery platforms, common fees charged or retained by these platforms include service fees, processing fees, and delivery fees. Depending on the platform and the fee at issue, the fee may be charged to the restaurant as a condition of being listed on the platform, or to the person ordering the meal.

Most states have not yet expressly taken a position on whether fees charged by a meal-delivery platform are taxable, but there are some notable exceptions. For example, Texas issued a private letter ruling in September 2021 finding that numerous fees charged by a meal-delivery platform, including service fees, credit card processing fees, and other special fees, were all subject to sales tax as data processing services.[12] To the contrary, Tennessee issued a letter ruling in April 2022 advising that service fees and other fees charged by a meal-delivery platform were not

taxable under the state's marketplace facilitator law, because the "true object" of these fees was the provision of a non-taxable service. [13]

Other states take the position that, broadly speaking, amounts retained by a marketplace facilitator in connection with the sale of the taxable item via the facilitator's platform are subject to sales tax as part of the measure of gross receipts.[14] In other states, the taxability of the fee may depend on its characterization. For example, in several states, "delivery fees" associated with the sale of food are taxable.[15] However, more amorphous "service fees" may not be taxable, particularly if the service charge is separately stated and the state does not generally tax services.[16] In still other states, amounts retained by a marketplace facilitator that are contingent on a sale being made (*e.g.*, fees or commissions paid by a marketplace seller to a marketplace facilitator after a sale is made) are excluded from sales tax. [17]

Overall, the taxability of fees charged or retained by meal-delivery platforms varies widely from state to state (and at times, from fee to fee), and therefore meal-delivery platforms should conduct a careful state-by-state review to ensure that they are not undercollecting or overcollecting sales tax on fees.

Applicability of Special Transaction Taxes

Finally, a meal-delivery platform should consider whether it is potentially subject to transaction taxes other than the state's general sales tax. Some states (*e.g.*, New Hampshire and Vermont) impose a special meals tax in addition to or in lieu of the sales tax.[18] New Hampshire, for example, does not impose a general sales tax but does impose a meals and rooms tax. Under this law, a meal-delivery platform is considered an "operator" that is required to collect and remit the state meals and rooms tax if: (1) the consumer purchases a taxable meal directly from the meal-delivery platform; and (2) the price paid by the consumer to the meal-delivery platform for the meal includes the purchase and delivery of the meal to the consumer.[19] Vermont similarly requires meal-delivery platforms to register as operators and remit the state meals and rooms tax, and requires meal-delivery platforms to collect and remit tax on facilitation fees, delivery fees,

and other fees retained by the platform.[20] In Vermont, the meals and rooms tax applies in addition to the sales tax.

Even more troubling, some states impose special meals taxes at the local level. For example, certain localities in North Carolina impose a local meals tax.[21] Beginning July 1, 2020, meal-delivery platforms that are required to remit state and local sales and use taxes are also required to remit the local meals tax on prepared food and beverages, and these taxes must be remitted to the taxing county rather than the state.[22] As discussed in the first article in this series,[23] the question of whether locally-imposed taxes can be collected from marketplace facilitators lacking a physical presence in the state raises constitutional concerns. Namely, many of the constitutional "safeguards" referenced by the *Wayfair* Court (*e.g.* , economic nexus thresholds, centralized filing mechanisms, and uniformity standards) don't necessarily exist in the locally-administered tax consequences, and the practical burden that remote marketplaces may encounter in attempting to comply with thousands of different local taxing statutes raises "undue burden" concerns that were first envisioned by the Supreme Court in *Pike v. Bruce Church, Inc.* [24] and later referenced in *Wayfair*.

The Takeaway

With the proliferation of state marketplace facilitator laws, states have begun focusing increased attention on the transaction tax obligations of specialized intermediaries, including meal-delivery platforms. However, as with other types of specialized intermediaries, such as lodging and passenger transportation platforms, the states have taken different approaches to what these platforms' obligations should be. For meal-delivery platforms in particular, there is little uniformity among the states regarding whether these platforms are generally required to collect and remit transaction taxes and the extent to which the platforms' fees are also subject to tax. Imposition and collection of local taxes also varies widely among the states, in some cases generating constitutional issues yet to be resolved. To avoid surprises on audit, it is crucial for meal-delivery platforms and their advisors to carefully examine each state's tax laws and

evaluate the application of those laws to the meal-delivery transactions facilitated by the platform.

Summary of the HIPAA Privacy Rule

This is a summary of key elements of the Privacy Rule including who is covered, what information is protected, and how protected health information can be used and disclosed. Because it is an overview of the Privacy Rule, it does not address every detail of each provision.

[Summary of the Privacy Rule [PDF, 381 KB]](#)

On this page:

- [Introduction](#)
- [Statutory & Regulatory Background](#)
- [Who is Covered by the Privacy Rule](#)
- [Business Associates](#)
- [What Information is Protected](#)
- [General Principle for Uses and Disclosures](#)
- [Permitted Uses and Disclosures](#)
- [Authorized Uses and Disclosures](#)
- [Limiting Uses and Disclosures to the Minimum Necessary](#)
- [Notice and Other Individual Right](#)
- [Administrative Requirements](#)
- [Organizational Options](#)
- [Other Provisions: Personal Representatives and Minors](#)
- [State Law](#)
- [Enforcement and Penalties for Noncompliance](#)
- [Compliance Dates](#)

Introduction

The *Standards for Privacy of Individually Identifiable Health Information* ("Privacy Rule") establishes, for the first time, a set of national standards for the protection of certain health information. The U.S. Department of Health and Human Services ("HHS") issued the Privacy Rule to implement the requirement of the Health Insurance Portability and Accountability Act of 1996 ("HIPAA").[1] The Privacy Rule standards address the use and disclosure of individuals' health information—called "protected health information" by organizations subject to the Privacy Rule — called "covered entities," as well as standards for individuals' privacy rights to understand and control how their health information is used. Within HHS, the Office for Civil Rights ("OCR") has responsibility for implementing and enforcing the Privacy Rule with respect to voluntary compliance activities and civil money penalties.

A major goal of the Privacy Rule is to assure that individuals' health information is properly protected while allowing the flow of health information needed to provide and promote high quality health care and to protect the public's health and well being. The Rule strikes a balance that permits important uses of information, while protecting the privacy of people who seek care and healing. Given that the health care marketplace is diverse, the Rule is designed to be flexible and comprehensive to cover the variety of uses and disclosures that need to be addressed.

This is a summary of key elements of the Privacy Rule and not a complete or comprehensive guide to compliance. Entities regulated by the Rule are obligated to comply with all of its applicable requirements and should not rely on this summary as a source of legal information or advice. To make it easier for entities to review the complete requirements of the Rule, provisions of the Rule referenced in this summary are cited in the end notes. Visit our [Privacy Rule](#) section to view the entire Rule, and for other additional helpful information about how the Rule applies. In the event of a conflict between this summary and the Rule, the Rule governs.

Statutory and Regulatory Background

The Health Insurance Portability and Accountability Act of 1996 (HIPAA), Public Law 104-191, was enacted on August 21, 1996. Sections 261 through 264 of HIPAA require the Secretary of HHS to publicize standards for the electronic exchange, privacy and security of health information. Collectively these are known as the *Administrative*

Simplification provisions.

HIPAA required the Secretary to issue privacy regulations governing individually identifiable health information, if Congress did not enact privacy legislation within three years of the passage of HIPAA. Because Congress did not enact privacy legislation, HHS developed a proposed rule and released it for public comment on November 3, 1999. The Department received over 52,000 public comments. The final regulation, the Privacy Rule, was published December 28, 2000.[2]

In March 2002, the Department proposed and released for public comment modifications to the Privacy Rule. The Department received over 11,000 comments.The final modifications were published in final form on August 14, 2002.[3] A text combining the final regulation and the modifications can be found at 45 CFR Part 160 and Part 164, Subparts A and E.

Who is Covered by the Privacy Rule

The Privacy Rule, as well as all the Administrative Simplification rules, apply to health plans, health care clearinghouses, and to any health care provider who transmits health information in electronic form in connection with transactions for which the Secretary of HHS has adopted standards under HIPAA (the "covered entities"). For help in determining whether you are covered, use CMS's decision tool.

Health Plans. Individual and group plans that provide or pay the cost of medical care are covered entities.[4] Health plans include health, dental, vision, and prescription drug insurers, health maintenance organizations ("HMOs"), Medicare, Medicaid, Medicare+Choice and Medicare supplement insurers, and long-term care insurers (excluding nursing home fixed-indemnity policies). Health plans also include employer-sponsored group health plans, government and church-sponsored health plans, and multi-employer health plans. There are exceptions—a group health plan with less than 50 participants that is administered solely by the employer that established and maintains the plan is not a covered entity. Two types of government-funded programs are not health plans: (1) those whose principal purpose is not providing or paying the cost of health care, such as the food stamps program; and (2) those programs whose principal activity is directly providing health care, such as a community health center,[5] or the making of grants to fund the direct provision of health care. Certain types of insurance entities are also not health plans, including entities providing only workers' compensation, automobile insurance, and property and casualty insurance. If an insurance entity has separable lines of business, one of which is a health plan, the HIPAA regulations apply to the entity with respect to the health plan line of business.

Health Care Providers. Every health care provider, regardless of size, who electronically transmits health information in connection with certain transactions, is a

covered entity. These transactions include claims, benefit eligibility inquiries, referral authorization requests, or other transactions for which HHS has established standards under the HIPAA Transactions Rule.[6] Using electronic technology, such as email, does not mean a health care provider is a covered entity; the transmission must be in connection with a standard transaction. The Privacy Rule covers a health care provider whether it electronically transmits these transactions directly or uses a billing service or other third party to do so on its behalf. Health care providers include all "providers of services" (e.g., institutional providers such as hospitals) and "providers of medical or health services" (e.g., non-institutional providers such as physicians, dentists and other practitioners) as defined by Medicare, and any other person or organization that furnishes, bills, or is paid for health care.

Health Care Clearinghouses. *Health care clearinghouses* are entities that process nonstandard information they receive from another entity into a standard (i.e., standard format or data content), or vice versa.[7] In most instances, health care clearinghouses will receive individually identifiable health information only when they are providing these processing services to a health plan or health care provider as a business associate. In such instances, only certain provisions of the Privacy Rule are applicable to the health care clearinghouse's uses and disclosures of protected health information.[8] Health care clearinghouses include billing services, repricing companies, community health management information systems, and value-added networks and switches if these entities perform clearinghouse functions.

Business Associates

Business Associate Defined. In general, a business associate is a person or organization, other than a member of a covered entity's workforce, that performs certain functions or activities on behalf of, or provides certain services to, a covered entity that involve the use or disclosure of individually identifiable health information. Business associate functions or activities on behalf of a covered entity include claims processing, data analysis, utilization review, and billing.[9] Business associate services to a covered entity are limited to legal, actuarial, accounting, consulting, data aggregation, management, administrative, accreditation, or financial services. However, persons or organizations are not considered business associates if their functions or services do not involve the use or disclosure of protected health information, and where any access to protected health information by such persons would be incidental, if at all. A covered entity can be the business associate of another covered entity.

Business Associate Contract. When a covered entity uses a contractor or other non-workforce member to perform *"business associate"* services or activities, the Rule requires that the covered entity include certain protections for the information in a business associate agreement (in certain circumstances governmental entities may use

alternative means to achieve the same protections). In the business associate contract, a covered entity must impose specified written safeguards on the individually identifiable health information used or disclosed by its business associates.[10] Moreover, a covered entity may not contractually authorize its business associate to make any use or disclosure of protected health information that would violate the Rule. Covered entities that had an existing written contract or agreement with business associates prior to October 15, 2002, which was not renewed or modified prior to April 14, 2003, were permitted to continue to operate under that contract until they renewed the contract or April 14, 2004, whichever was first.[11] See additional guidance on Business Associates and sample business associate contract language.

What Information is Protected

Protected Health Information. The Privacy Rule protects all *"individually identifiable health information"* held or transmitted by a covered entity or its business associate, in any form or media, whether electronic, paper, or oral. The Privacy Rule calls this information "protected health information (PHI)."[12]

"Individually identifiable health information" is information, including demographic data, that relates to:

- the individual's past, present or future physical or mental health or condition,

- the provision of health care to the individual, or

- the past, present, or future payment for the provision of health care to the individual,

and that identifies the individual or for which there is a reasonable basis to believe it can be used to identify the individual.[13] Individually identifiable health information includes many common identifiers (e.g., name, address, birth date, Social Security Number).

The Privacy Rule excludes from protected health information employment records that a covered entity maintains in its capacity as an employer and education and certain other records subject to, or defined in, the Family Educational Rights and Privacy Act, 20 U.S.C. §1232g.

De-Identified Health Information. There are no restrictions on the use or disclosure of de-identified health information.[14] De-identified health information neither identifies nor provides a reasonable basis to identify an individual. There are two ways to de-identify information; either: (1) a formal determination by a qualified statistician; or (2) the removal of specified identifiers of the individual and of the individual's relatives, household members, and employers is required, and is adequate only if the covered entity has no actual knowledge that the remaining information could be used to identify the individual.[15]

General Principle for Uses and Disclosures

Basic Principle. A major purpose of the Privacy Rule is to define and limit the circumstances in which an individual's protected heath information may be used or disclosed by covered entities. A covered entity may not use or disclose protected health information, except either: (1) as the Privacy Rule permits or requires; or (2) as the individual who is the subject of the information (or the individual's personal representative) authorizes in writing.[16]

Required Disclosures. A covered entity must disclose protected health information in only two situations: (a) to individuals (or their personal representatives) specifically when they request access to, or an accounting of disclosures of, their protected health information; and (b) to HHS when it is undertaking a compliance investigation or review or enforcement action.[17] See additional guidance on Government Access.

Permitted Uses and Disclosures

Permitted Uses and Disclosures. A covered entity is permitted, but not required, to use and disclose protected health information, without an individual's authorization, for the following purposes or situations: (1) To the Individual (unless required for access or accounting of disclosures); (2) Treatment, Payment, and Health Care Operations; (3) Opportunity to Agree or Object; (4) Incident to an otherwise permitted use and disclosure; (5) Public Interest and Benefit Activities; and (6) Limited Data Set for the purposes of research, public health or health care operations.[18] Covered entities may rely on professional ethics and best judgments in deciding which of these permissive uses and disclosures to make.

(1) To the Individual. A covered entity may disclose protected health information to the individual who is the subject of the information.

(2) Treatment, Payment, Health Care Operations. A covered entity may use and disclose protected health information for its own treatment, payment, and health care operations activities.[19] A covered entity also may disclose protected health information for the treatment activities of any health care provider, the payment activities of another covered entity and of any health care provider, or the health care operations of another covered entity involving either quality or competency assurance activities or fraud and abuse detection and compliance activities, if both covered entities have or had a relationship with the individual and the protected health information pertains to the relationship. See additional guidance on Treatment, Payment, & Health Care Operations.

Treatment is the provision, coordination, or management of health care and related services for an individual by one or more health care providers, including consultation

between providers regarding a patient and referral of a patient by one provider to another.[20]

Payment encompasses activities of a health plan to obtain premiums, determine or fulfill responsibilities for coverage and provision of benefits, and furnish or obtain reimbursement for health care delivered to an individual[21] and activities of a health care provider to obtain payment or be reimbursed for the provision of health care to an individual.

Health care operations are any of the following activities: (a) quality assessment and improvement activities, including case management and care coordination; (b) competency assurance activities, including provider or health plan performance evaluation, credentialing, and accreditation; (c) conducting or arranging for medical reviews, audits, or legal services, including fraud and abuse detection and compliance programs; (d) specified insurance functions, such as underwriting, risk rating, and reinsuring risk; (e) business planning, development, management, and administration; and (f) business management and general administrative activities of the entity, including but not limited to: de-identifying protected health information, creating a limited data set, and certain fundraising for the benefit of the covered entity.[22]

Most uses and disclosures of psychotherapy notes for treatment, payment, and health care operations purposes require an authorization as described below.[23] Obtaining "consent" (written permission from individuals to use and disclose their protected health information for treatment, payment, and health care operations) is optional under the Privacy Rule for all covered entities.[24] The content of a consent form, and the process for obtaining consent, are at the discretion of the covered entity electing to seek consent.

(3) Uses and Disclosures with Opportunity to Agree or Object. Informal permission may be obtained by asking the individual outright, or by circumstances that clearly give the individual the opportunity to agree, acquiesce, or object. Where the individual is incapacitated, in an emergency situation, or not available, covered entities generally may make such uses and disclosures, if in the exercise of their professional judgment, the use or disclosure is determined to be in the best interests of the individual.

Facility Directories. It is a common practice in many health care facilities, such as hospitals, to maintain a directory of patient contact information. A covered health care provider may rely on an individual's informal permission to list in its facility directory the individual's name, general condition, religious affiliation, and location in the provider's facility.[25] The provider may then disclose the individual's condition and location in the facility to anyone asking for the individual by name, and also may disclose religious affiliation to clergy. Members of the clergy are not required to ask for the individual by name when inquiring about patient religious affiliation.

For Notification and Other Purposes. A covered entity also may rely on an individual's informal permission to disclose to the individual's family, relatives, or friends, or to other persons whom the individual identifies, protected health information directly relevant to that person's involvement in the individual's care or payment for care.[26] This provision, for example, allows a pharmacist to dispense filled prescriptions to a person acting on behalf of the patient. Similarly, a covered entity may rely on an individual's informal permission to use or disclose protected health information for the purpose of notifying (including identifying or locating) family members, personal representatives, or others responsible for the individual's care of the individual's location, general condition, or death. In addition, protected health information may be disclosed for notification purposes to public or private entities authorized by law or charter to assist in disaster relief efforts.

(4) Incidental Use and Disclosure. The Privacy Rule does not require that every risk of an incidental use or disclosure of protected health information be eliminated. A use or disclosure of this information that occurs as a result of, or as "incident to," an otherwise permitted use or disclosure is permitted as long as the covered entity has adopted reasonable safeguards as required by the Privacy Rule, and the information being shared was limited to the "minimum necessary," as required by the Privacy Rule.[27] See additional guidance on [Incidental Uses and Disclosures](#).

(5) Public Interest and Benefit Activities. The Privacy Rule permits use and disclosure of protected health information, without an individual's authorization or permission, for 12 national priority purposes.[28] These disclosures are permitted, although not required, by the Rule in recognition of the important uses made of health information outside of the health care context. Specific conditions or limitations apply to each public interest purpose, striking the balance between the individual privacy interest and the public interest need for this information.

Required by Law. Covered entities may use and disclose protected health information without individual authorization as required by law (including by statute, regulation, or court orders).[29]

Public Health Activities. Covered entities may disclose protected health information to: (1) public health authorities authorized by law to collect or receive such information for preventing or controlling disease, injury, or disability and to public health or other government authorities authorized to receive reports of child abuse and neglect; (2) entities subject to FDA regulation regarding FDA regulated products or activities for purposes such as adverse event reporting, tracking of products, product recalls, and post-marketing surveillance; (3) individuals who may have contracted or been exposed to a communicable disease when notification is authorized by law; and (4) employers, regarding employees, when requested by employers, for information concerning a work-

related illness or injury or workplace related medical surveillance, because such information is needed by the employer to comply with the Occupational Safety and Health Administration (OHSA), the Mine Safety and Health Administration (MHSA), or similar state law.[30] See additional guidance on [Public Health Activities] and [CDC's web pages on Public Health and HIPAA Guidance].

Victims of Abuse, Neglect or Domestic Violence. In certain circumstances, covered entities may disclose protected health information to appropriate government authorities regarding victims of abuse, neglect, or domestic violence.[31]

Health Oversight Activities. Covered entities may disclose protected health information to health oversight agencies (as defined in the Rule) for purposes of legally authorized health oversight activities, such as audits and investigations necessary for oversight of the health care system and government benefit programs.[32]

Judicial and Administrative Proceedings. Covered entities may disclose protected health information in a judicial or administrative proceeding if the request for the information is through an order from a court or administrative tribunal. Such information may also be disclosed in response to a subpoena or other lawful process if certain assurances regarding notice to the individual or a protective order are provided.[33]

Law Enforcement Purposes. Covered entities may disclose protected health information to law enforcement officials for law enforcement purposes under the following six circumstances, and subject to specified conditions: (1) as required by law (including court orders, court-ordered warrants, subpoenas) and administrative requests; (2) to identify or locate a suspect, fugitive, material witness, or missing person; (3) in response to a law enforcement official's request for information about a victim or suspected victim of a crime; (4) to alert law enforcement of a person's death, if the covered entity suspects that criminal activity caused the death; (5) when a covered entity believes that protected health information is evidence of a crime that occurred on its premises; and (6) by a covered health care provider in a medical emergency not occurring on its premises, when necessary to inform law enforcement about the commission and nature of a crime, the location of the crime or crime victims, and the perpetrator of the crime.[34]

Decedents. Covered entities may disclose protected health information to funeral directors as needed, and to coroners or medical examiners to identify a deceased person, determine the cause of death, and perform other functions authorized by law.[35]

Cadaveric Organ, Eye, or Tissue Donation. Covered entities may use or disclose protected health information to facilitate the donation and transplantation of cadaveric organs, eyes, and tissue.[36]

Research. "Research" is any systematic investigation designed to develop or contribute to generalizable knowledge.[37] The Privacy Rule permits a covered entity to use and disclose protected health information for research purposes, without an individual's authorization, provided the covered entity obtains either: (1) documentation that an alteration or waiver of individuals' authorization for the use or disclosure of protected health information about them for research purposes has been approved by an Institutional Review Board or Privacy Board; (2) representations from the researcher that the use or disclosure of the protected health information is solely to prepare a research protocol or for similar purpose preparatory to research, that the researcher will not remove any protected health information from the covered entity, and that protected health information for which access is sought is necessary for the research; or (3) representations from the researcher that the use or disclosure sought is solely for research on the protected health information of decedents, that the protected health information sought is necessary for the research, and, at the request of the covered entity, documentation of the death of the individuals about whom information is sought.[38] A covered entity also may use or disclose, without an individuals' authorization, a limited data set of protected health information for research purposes (see discussion below).[39] See additional guidance on Research and NIH's publication of "Protecting Personal Health Information in Research: Understanding the HIPAA Privacy Rule." [PDF]

Serious Threat to Health or Safety. Covered entities may disclose protected health information that they believe is necessary to prevent or lessen a serious and imminent threat to a person or the public, when such disclosure is made to someone they believe can prevent or lessen the threat (including the target of the threat). Covered entities may also disclose to law enforcement if the information is needed to identify or apprehend an escapee or violent criminal.[40]

Essential Government Functions. An authorization is not required to use or disclose protected health information for certain essential government functions. Such functions include: assuring proper execution of a military mission, conducting intelligence and national security activities that are authorized by law, providing protective services to the President, making medical suitability determinations for U.S. State Department employees, protecting the health and safety of inmates or employees in a correctional institution, and determining eligibility for or conducting enrollment in certain government benefit programs.[41]

Workers' Compensation. Covered entities may disclose protected health information as authorized by, and to comply with, workers' compensation laws and other similar programs providing benefits for work-related injuries or illnesses.[42] See additional guidance on Workers' Compensation.

(6) Limited Data Set. A limited data set is protected health information from which certain specified direct identifiers of individuals and their relatives, household members, and employers have been removed.43 A limited data set may be used and disclosed for research, health care operations, and public health purposes, provided the recipient enters into a data use agreement promising specified safeguards for the protected health information within the limited data set.

Authorized Uses and Disclosures

Authorization. A covered entity must obtain the individual's written authorization for any use or disclosure of protected health information that is not for treatment, payment or health care operations or otherwise permitted or required by the Privacy Rule.[44] A covered entity may not condition treatment, payment, enrollment, or benefits eligibility on an individual granting an authorization, except in limited circumstances.[45]

An authorization must be written in specific terms. It may allow use and disclosure of protected health information by the covered entity seeking the authorization, or by a third party. Examples of disclosures that would require an individual's authorization include disclosures to a life insurer for coverage purposes, disclosures to an employer of the results of a pre-employment physical or lab test, or disclosures to a pharmaceutical firm for their own marketing purposes.

All authorizations must be in plain language, and contain specific information regarding the information to be disclosed or used, the person(s) disclosing and receiving the information, expiration, right to revoke in writing, and other data. The Privacy Rule contains transition provisions applicable to authorizations and other express legal permissions obtained prior to April 14, 2003.[46]

Psychotherapy Notes.[47] A covered entity must obtain an individual's authorization to use or disclose psychotherapy notes with the following exceptions:[48]

- The covered entity who originated the notes may use them for treatment.

- A covered entity may use or disclose, without an individual's authorization, the psychotherapy notes, for its own training, and to defend itself in legal proceedings brought by the individual, for HHS to investigate or determine the covered entity's compliance with the Privacy Rules, to avert a serious and imminent threat to public health or safety, to a health oversight agency for lawful oversight of the originator of the psychotherapy notes, for the lawful activities of a coroner or medical examiner or as required by law.

Marketing. Marketing is any communication about a product or service that encourages recipients to purchase or use the product or service.[49] The Privacy Rule carves out the following health-related activities from this definition of marketing:

- Communications to describe health-related products or services, or payment for them, provided by or included in a benefit plan of the covered entity making the communication;

- Communications about participating providers in a provider or health plan network, replacement of or enhancements to a health plan, and health-related products or services available only to a health plan's enrollees that add value to, but are not part of, the benefits plan;

- Communications for treatment of the individual; and

- Communications for case management or care coordination for the individual, or to direct or recommend alternative treatments, therapies, health care providers, or care settings to the individual.

Marketing also is an arrangement between a covered entity and any other entity whereby the covered entity discloses protected health information, in exchange for direct or indirect remuneration, for the other entity to communicate about its own products or services encouraging the use or purchase of those products or services. A covered entity must obtain an authorization to use or disclose protected health information for marketing, except for face-to-face marketing communications between a covered entity and an individual, and for a covered entity's provision of promotional gifts of nominal value. No authorization is needed, however, to make a communication that falls within one of the exceptions to the marketing definition. An authorization for marketing that involves the covered entity's receipt of direct or indirect remuneration from a third party must reveal that fact. See additional guidance on Marketing.

Limiting Uses and Disclosures to the Minimum Necessary

Minimum Necessary. A central aspect of the Privacy Rule is the principle of "minimum necessary" use and disclosure. A covered entity must make reasonable efforts to use, disclose, and request only the minimum amount of protected health information needed to accomplish the intended purpose of the use, disclosure, or request.[50] A covered entity must develop and implement policies and procedures to reasonably limit uses and disclosures to the minimum necessary. When the minimum necessary standard applies to a use or disclosure, a covered entity may not use, disclose, or request the entire medical record for a particular purpose, unless it can specifically justify the whole record as the amount reasonably needed for the purpose. See additional guidance on Minimum Necessary.

The minimum necessary requirement is not imposed in any of the following circumstances: (a) disclosure to or a request by a health care provider for treatment; (b) disclosure to an individual who is the subject of the information, or the individual's

personal representative; (c) use or disclosure made pursuant to an authorization; (d) disclosure to HHS for complaint investigation, compliance review or enforcement; (e) use or disclosure that is required by law; or (f) use or disclosure required for compliance with the HIPAA Transactions Rule or other HIPAA Administrative Simplification Rules.

Access and Uses. For internal uses, a covered entity must develop and implement policies and procedures that restrict access and uses of protected health information based on the specific roles of the members of their workforce. These policies and procedures must identify the persons, or classes of persons, in the workforce who need access to protected health information to carry out their duties, the categories of protected health information to which access is needed, and any conditions under which they need the information to do their jobs.

Disclosures and Requests for Disclosures. Covered entities must establish and implement policies and procedures (which may be standard protocols) for *routine, recurring disclosures, or requests for disclosures*, that limits the protected health information disclosed to that which is the minimum amount reasonably necessary to achieve the purpose of the disclosure. Individual review of each disclosure is not required. For non-routine, non-recurring disclosures, or requests for disclosures that it makes, covered entities must develop criteria designed to limit disclosures to the information reasonably necessary to accomplish the purpose of the disclosure and review each of these requests individually in accordance with the established criteria.

Reasonable Reliance. If another covered entity makes a request for protected health information, a covered entity may rely, if reasonable under the circumstances, on the request as complying with this minimum necessary standard. Similarly, a covered entity may rely upon requests as being the minimum necessary protected health information from: (a) a public official, (b) a professional (such as an attorney or accountant) who is the covered entity's business associate, seeking the information to provide services to or for the covered entity; or (c) a researcher who provides the documentation or representation required by the Privacy Rule for research.

Notice and Other Individual Rights

Privacy Practices Notice. Each covered entity, with certain exceptions, must provide a notice of its privacy practices.[51] The Privacy Rule requires that the notice contain certain elements. The notice must describe the ways in which the covered entity may use and disclose protected health information. The notice must state the covered entity's duties to protect privacy, provide a notice of privacy practices, and abide by the terms of the current notice. The notice must describe individuals' rights, including the right to complain to HHS and to the covered entity if they believe their privacy rights have been violated. The notice must include a point of contact for further information and for making complaints to the covered entity. Covered entities must act in accordance with

their notices. The Rule also contains specific distribution requirements for direct treatment providers, all other health care providers, and health plans. See additional guidance on [Notice](#).

Notice Distribution. A covered health care provider with a *direct treatment* relationship with individuals must have delivered a privacy practices notice to patients starting April 14, 2003 as follows:

- Not later than the first service encounter by personal delivery (for patient visits), by automatic and contemporaneous electronic response (for electronic service delivery), and by prompt mailing (for telephonic service delivery);

- By posting the notice at each service delivery site in a clear and prominent place where people seeking service may reasonably be expected to be able to read the notice; and

- In emergency treatment situations, the provider must furnish its notice as soon as practicable after the emergency abates.

Covered entities, whether direct treatment providers or indirect treatment providers (such as laboratories) or health plans must supply notice to anyone on request.[52] A covered entity must also make its notice electronically available on any web site it maintains for customer service or benefits information.

The covered entities in an organized health care arrangement may use a joint privacy practices notice, as long as each agrees to abide by the notice content with respect to the protected health information created or received in connection with participation in the arrangement.[53] Distribution of a joint notice by any covered entity participating in the organized health care arrangement at the first point that an OHCA member has an obligation to provide notice satisfies the distribution obligation of the other participants in the organized health care arrangement.

A health plan must distribute its privacy practices notice to each of its enrollees by its Privacy Rule compliance date. Thereafter, the health plan must give its notice to each new enrollee at enrollment, and send a reminder to every enrollee at least once every three years that the notice is available upon request. A health plan satisfies its distribution obligation by furnishing the notice to the "named insured," that is, the subscriber for coverage that also applies to spouses and dependents.

- **Acknowledgement of Notice Receipt.** A covered health care provider with a direct treatment relationship with individuals must make a good faith effort to obtain written acknowledgement from patients of receipt of the privacy practices notice.[54] The Privacy Rule does not prescribe any particular content for the acknowledgement. The provider must document the reason for any failure to

obtain the patient's written acknowledgement. The provider is relieved of the need to request acknowledgement in an emergency treatment situation.

Access. Except in certain circumstances, individuals have the right to review and obtain a copy of their protected health information in a covered entity's designated record set.[55] The "designated record set" is that group of records maintained by or for a covered entity that is used, in whole or part, to make decisions about individuals, or that is a provider's medical and billing records about individuals or a health plan's enrollment, payment, claims adjudication, and case or medical management record systems.[56] The Rule excepts from the right of access the following protected health information: psychotherapy notes, information compiled for legal proceedings, laboratory results to which the Clinical Laboratory Improvement Act (CLIA) prohibits access, or information held by certain research laboratories. For information included within the right of access, covered entities may deny an individual access in certain specified situations, such as when a health care professional believes access could cause harm to the individual or another. In such situations, the individual must be given the right to have such denials reviewed by a licensed health care professional for a second opinion.[57] Covered entities may impose reasonable, cost-based fees for the cost of copying and postage.

Amendment. The Rule gives individuals the right to have covered entities amend their protected health information in a designated record set when that information is inaccurate or incomplete. [58] If a covered entity accepts an amendment request, it must make reasonable efforts to provide the amendment to persons that the individual has identified as needing it, and to persons that the covered entity knows might rely on the information to the individual's detriment.[59] If the request is denied, covered entities must provide the individual with a written denial and allow the individual to submit a statement of disagreement for inclusion in the record. The Rule specifies processes for requesting and responding to a request for amendment. A covered entity must amend protected health information in its designated record set upon receipt of notice to amend from another covered entity.

Disclosure Accounting. Individuals have a right to an accounting of the disclosures of their protected health information by a covered entity or the covered entity's business associates.[60] The maximum disclosure accounting period is the six years immediately preceding the accounting request, except a covered entity is not obligated to account for any disclosure made before its Privacy Rule compliance date.

The Privacy Rule does not require accounting for disclosures: (a) for treatment, payment, or health care operations; (b) to the individual or the individual's personal representative; (c) for notification of or to persons involved in an individual's health care or payment for health care, for disaster relief, or for facility directories; (d) pursuant to an authorization; (e) of a limited data set; (f) for national security or intelligence purposes;

(g) to correctional institutions or law enforcement officials for certain purposes regarding inmates or individuals in lawful custody; or (h) incident to otherwise permitted or required uses or disclosures. Accounting for disclosures to health oversight agencies and law enforcement officials must be temporarily suspended on their written representation that an accounting would likely impede their activities.

Restriction Request. Individuals have the right to request that a covered entity restrict use or disclosure of protected health information for treatment, payment or health care operations, disclosure to persons involved in the individual's health care or payment for health care, or disclosure to notify family members or others about the individual's general condition, location, or death.[61] A covered entity is under no obligation to agree to requests for restrictions. A covered entity that does agree must comply with the agreed restrictions, except for purposes of treating the individual in a medical emergency.[62]

Confidential Communications Requirements. Health plans and covered health care providers must permit individuals to request an alternative means or location for receiving communications of protected health information by means other than those that the covered entity typically employs.[63] For example, an individual may request that the provider communicate with the individual through a designated address or phone number. Similarly, an individual may request that the provider send communications in a closed envelope rather than a post card.

Health plans must accommodate reasonable requests if the individual indicates that the disclosure of all or part of the protected health information could endanger the individual. The health plan may not question the individual's statement of endangerment. Any covered entity may condition compliance with a confidential communication request on the individual specifying an alternative address or method of contact and explaining how any payment will be handled.

Administrative Requirements

HHS recognizes that covered entities range from the smallest provider to the largest, multi-state health plan. Therefore the flexibility and scalability of the Rule are intended to allow covered entities to analyze their own needs and implement solutions appropriate for their own environment. What is appropriate for a particular covered entity will depend on the nature of the covered entity's business, as well as the covered entity's size and resources.

Privacy Policies and Procedures. A covered entity must develop and implement written privacy policies and procedures that are consistent with the Privacy Rule.[64]

Privacy Personnel. A covered entity must designate a privacy official responsible for developing and implementing its privacy policies and procedures, and a contact person

or contact office responsible for receiving complaints and providing individuals with information on the covered entity's privacy practices.[65]

Workforce Training and Management. Workforce members include employees, volunteers, trainees, and may also include other persons whose conduct is under the direct control of the entity (whether or not they are paid by the entity).[66] A covered entity must train all workforce members on its privacy policies and procedures, as necessary and appropriate for them to carry out their functions.[67] A covered entity must have and apply appropriate sanctions against workforce members who violate its privacy policies and procedures or the Privacy Rule.[68]

Mitigation. A covered entity must mitigate, to the extent practicable, any harmful effect it learns was caused by use or disclosure of protected health information by its workforce or its business associates in violation of its privacy policies and procedures or the Privacy Rule.[69]

Data Safeguards. A covered entity must maintain reasonable and appropriate administrative, technical, and physical safeguards to prevent intentional or unintentional use or disclosure of protected health information in violation of the Privacy Rule and to limit its incidental use and disclosure pursuant to otherwise permitted or required use or disclosure.[70] For example, such safeguards might include shredding documents containing protected health information before discarding them, securing medical records with lock and key or pass code, and limiting access to keys or pass codes. See additional guidance on Incidental Uses and Disclosures.

Complaints. A covered entity must have procedures for individuals to complain about its compliance with its privacy policies and procedures and the Privacy Rule.[71] The covered entity must explain those procedures in its privacy practices notice.[72]

Among other things, the covered entity must identify to whom individuals can submit complaints to at the covered entity and advise that complaints also can be submitted to the Secretary of HHS.

Retaliation and Waiver. A covered entity may not retaliate against a person for exercising rights provided by the Privacy Rule, for assisting in an investigation by HHS or another appropriate authority, or for opposing an act or practice that the person believes in good faith violates the Privacy Rule.[73] A covered entity may not require an individual to waive any right under the Privacy Rule as a condition for obtaining treatment, payment, and enrollment or benefits eligibility.[74]

Documentation and Record Retention. A covered entity must maintain, until six years after the later of the date of their creation or last effective date, its privacy policies and procedures, its privacy practices notices, disposition of complaints, and other actions, activities, and designations that the Privacy Rule requires to be documented.[75]

Fully-Insured Group Health Plan Exception. The only administrative obligations with which a fully-insured group health plan that has no more than enrollment data and summary health information is required to comply are the (1) ban on retaliatory acts and waiver of individual rights, and (2) documentation requirements with respect to plan documents if such documents are amended to provide for the disclosure of protected health information to the plan sponsor by a health insurance issuer or HMO that services the group health plan.[76]

Organizational Options

The Rule contains provisions that address a variety of organizational issues that may affect the operation of the privacy protections.

Hybrid Entity. The Privacy Rule permits a covered entity that is a single legal entity and that conducts both covered and non-covered functions to elect to be a "hybrid entity."[77] (The activities that make a person or organization a covered entity are its "covered functions."[78]) To be a hybrid entity, the covered entity must designate in writing its operations that perform covered functions as one or more "health care components." After making this designation, most of the requirements of the Privacy Rule will apply only to the health care components. A covered entity that does not make this designation is subject in its entirety to the Privacy Rule.

Affiliated Covered Entity. Legally separate covered entities that are affiliated by common ownership or control may designate themselves (including their health care components) as a single covered entity for Privacy Rule compliance.[79] The designation must be in writing. An affiliated covered entity that performs multiple covered functions must operate its different covered functions in compliance with the Privacy Rule provisions applicable to those covered functions.

Organized Health Care Arrangement. The Privacy Rule identifies relationships in which participating covered entities share protected health information to manage and benefit their common enterprise as "organized health care arrangements."[80] Covered entities in an organized health care arrangement can share protected health information with each other for the arrangement's joint health care operations.[81]

Covered Entities With Multiple Covered Functions. A covered entity that performs multiple covered functions must operate its different covered functions in compliance with the Privacy Rule provisions applicable to those covered functions.[82] The covered entity may not use or disclose the protected health information of an individual who receives services from one covered function (e.g., health care provider) for another covered function (e.g., health plan) if the individual is not involved with the other function.

Group Health Plan disclosures to Plan Sponsors. A group health plan and the health insurer or HMO offered by the plan may disclose the following protected health information to the "plan sponsor"—the employer, union, or other employee organization that sponsors and maintains the group health plan:[83]

- Enrollment or disenrollment information with respect to the group health plan or a health insurer or HMO offered by the plan.

- If requested by the plan sponsor, summary health information for the plan sponsor to use to obtain premium bids for providing health insurance coverage through the group health plan, or to modify, amend, or terminate the group health plan. "Summary health information" is information that summarizes claims history, claims expenses, or types of claims experience of the individuals for whom the plan sponsor has provided health benefits through the group health plan, and that is stripped of all individual identifiers other than five digit zip code (though it need not qualify as de-identified protected health information).

- Protected health information of the group health plan's enrollees for the plan sponsor to perform plan administration functions. The plan must receive certification from the plan sponsor that the group health plan document has been amended to impose restrictions on the plan sponsor's use and disclosure of the protected health information. These restrictions must include the representation that the plan sponsor will not use or disclose the protected health information for any employment-related action or decision or in connection with any other benefit plan.

Other Provisions: Personal Representatives and Minors

Personal Representatives. The Privacy Rule requires a covered entity to treat a *"personal representative"* the same as the individual, with respect to uses and disclosures of the individual's protected health information, as well as the individual's rights under the Rule.[84] A personal representative is a person legally authorized to make health care decisions on an individual's behalf or to act for a deceased individual or the estate. The Privacy Rule permits an exception when a covered entity has a reasonable belief that the personal representative may be abusing or neglecting the individual, or that treating the person as the personal representative could otherwise endanger the individual.

Special Case: Minors. In most cases, parents are the personal representatives for their minor children. Therefore, in most cases, parents can exercise individual rights, such as access to the medical record, on behalf of their minor children. In certain exceptional cases, the parent is not considered the personal representative. In these situations, the Privacy Rule defers to State and other law to determine the rights of parents to access

and control the protected health information of their minor children. If State and other law is silent concerning parental access to the minor's protected health information, a covered entity has discretion to provide or deny a parent access to the minor's health information, provided the decision is made by a licensed health care professional in the exercise of professional judgment. See additional guidance on Personal Representatives.

State Law

Preemption. In general, State laws that are contrary to the Privacy Rule are preempted by the federal requirements, which means that the federal requirements will apply.[85] "Contrary" means that it would be impossible for a covered entity to comply with both the State and federal requirements, or that the provision of State law is an obstacle to accomplishing the full purposes and objectives of the Administrative Simplification provisions of HIPAA.[86] The Privacy Rule provides exceptions to the general rule of federal preemption for contrary State laws that (1) relate to the privacy of individually identifiable health information and provide greater privacy protections or privacy rights with respect to such information, (2) provide for the reporting of disease or injury, child abuse, birth, or death, or for public health surveillance, investigation, or intervention, or (3) require certain health plan reporting, such as for management or financial audits.

Exception Determination. In addition, preemption of a contrary State law will not occur if HHS determines, in response to a request from a State or other entity or person, that the State law:

- Is necessary to prevent fraud and abuse related to the provision of or payment for health care,

- Is necessary to ensure appropriate State regulation of insurance and health plans to the extent expressly authorized by statute or regulation,

- Is necessary for State reporting on health care delivery or costs,

- Is necessary for purposes of serving a compelling public health, safety, or welfare need, and, if a Privacy Rule provision is at issue, if the Secretary determines that the intrusion into privacy is warranted when balanced against the need to be served; or

- Has as its principal purpose the regulation of the manufacture, registration, distribution, dispensing, or other control of any controlled substances (as defined in 21 U.S.C. 802), or that is deemed a controlled substance by State law.

Enforcement and Penalties for Noncompliance

Compliance. The Standards for Privacy of Individually Identifiable Health Information (Privacy Rule) establishes a set of national standards for the use and disclosure of an individual's health information – called protected health information – by covered entities, as well as standards for providing individuals with privacy rights to understand and control how their health information is used. The Department of Health and Human Services, Office for Civil Rights (OCR) is responsible for administering and enforcing these standards and may conduct complaint investigations and compliance reviews.

Consistent with the principles for achieving compliance provided in the Privacy Rule, OCR will seek the cooperation of covered entities and may provide technical assistance to help them comply voluntarily with the Privacy Rule. Covered entities that fail to comply voluntarily with the standards may be subject to civil money penalties. In addition, certain violations of the Privacy Rule may be subject to criminal prosecution. These penalty provisions are explained below.

Civil Money Penalties. OCR may impose a penalty on a covered entity for a failure to comply with a requirement of the Privacy Rule. Penalties will vary significantly depending on factors such as the date of the violation, whether the covered entity knew or should have known of the failure to comply, or whether the covered entity's failure to comply was due to willful neglect. Penalties may not exceed a calendar year cap for multiple violations of the same requirement.

Adjustments to CMP amounts for 2022 For violations on or after November 3, 2015

Penalty Amount Per Violation	**$127 - $63,973* per violation**
Calendar Year Cap for Violation of Identical Requirement or Prohibition	$25,000 - $1,919,173**

*The Department of Health and Human Services *may* make annual adjustments to the CMP amounts pursuant to the Federal Civil Penalties Inflation Adjustment Act Improvement Act of 2015. The annual inflation amounts are found at 45 CFR § 102.3.
**Pursuant to HHS's Notification of Enforcement Discretion

A penalty will not be imposed for violations in certain circumstances, such as if:

- the failure to comply was not due to willful neglect, and was corrected during a 30-day period after the entity knew or should have known the failure to comply had occurred (unless the period is extended at the discretion of OCR); or

- the Department of Justice has imposed a criminal penalty for the failure to comply (see below).

In addition, OCR may choose to reduce a penalty if the failure to comply was due to reasonable cause and the penalty would be excessive given the nature and extent of the noncompliance.

Before OCR imposes a penalty, it will notify the covered entity and provide the covered entity with an opportunity to provide written evidence of those circumstances that would reduce or bar a penalty. This evidence must be submitted to OCR within 30 days of receipt of the notice. In addition, if OCR states that it intends to impose a penalty, a covered entity has the right to request an administrative hearing to appeal the proposed penalty.

Criminal Penalties. A person who knowingly obtains or discloses individually identifiable health information in violation of the Privacy Rule may face a criminal penalty of up to $50,000 and up to one-year imprisonment. The criminal penalties increase to $100,000 and up to five years imprisonment if the wrongful conduct involves false pretenses, and to $250,000 and up to 10 years imprisonment if the wrongful conduct involves the intent to sell, transfer, or use identifiable health information for commercial advantage, personal gain or malicious harm. The Department of Justice is responsible for criminal prosecutions under the Priv.

Food Delivery App Development Guidelines

Food Delivery Applications have been exploding in popularity over the last few years, and a few emerging themes are shaping the future of food delivery in the next few years. Due to the beginning of the COVID-19 pandemic in early 2020, the worldwide food delivery sector was expanding at a pretty consistent rate.

Many young people in various places have surely made **Food Delivery Apps** extremely popular worldwide. The multitude of options accessible for applications to compare and pay with offer pricing from the Online Food Ordering App saves time and money. **Food Delivery App Development** will grow rapidly day by day.

In 1889, the first recorded food delivery was said to have occurred in Naples, Italy. When King Umberto I and Queen Margherita of Savoy visited Naples, they wanted to sample the local cuisine, specifically Rafaele Esposito's exquisite pizzas. **Reference: Online Food Ordering**

People first placed orders in person, then moved to phone calls, websites, tweets, and Instagram postings. Cars were first used for delivery, then bikes, motorbikes, robots, and drones. And what about the things that were delivered? While pizza has long been a popular choice, there are now virtually no restrictions on what you may order, including special diet cuisine for vegans and keto dieters. Videos from well-known chefs may even be included in meal packages.

Figure 01: Food Delivery App Development Summary

Food Delivery App Development Summary

Food delivery app development is becoming more popular. So, we wrote this post to help you start with food delivery app development. However, before we dive into the document, you might want to look at the food delivery app development summary. In this section, I've organized the key points into a chart to help you quickly grasp the fundamentals of **Food Delivery App Development**.

Let's take a moment to summarize the most important aspects of food delivery app development:

Service Type	Mobile App Development
Platform Type	Cross-platform, Apple App Store, Google Play Store, Microsoft Store
Devices	Mobile, Tablet, Android Tablet, Windows Tablet, iPad
Tech Stack	Java and Kotlin, Objective-C and Swift, React and Flutter, AWS and VULTF

Chart 01: Food Delivery App Development Summary

What is App Development?

Creating, developing, and deploying software applications is known as **Application Development**. It can be done by major corporations with enormous project teams or by a single freelance developer. Developing an application is referred to as application development, and it generally follows a defined approach.

Developers must consider many factors while building an app, including screen size, settings, and hardware specifications. Furthermore, each component of a mobile app must collaborate to develop a user experience that is speedy, clear, and easy to use.

Application development produces software for smartphones and digital assistants, primarily for Android and iOS platforms. The need for mobile app development is continuously increasing; more and more businesses want to have their own app, but what are the requirements? Our **Food Delivery App Development** team will have the answers for you.

Want to know more about App Development? Increased your knowledge and bulid your own application

What is Food Delivery App Development?

Food – delivery apps save you trips to the grocery store and allow you to order from a wider choice of restaurants and over longer distances than most establishments can offer organically.

Figure 02: What is Food Delivery App Development

A restaurant, store, or independent food-delivery company delivers food to a customer through food delivery. An order is usually placed via a restaurant's or grocer's website, mobile app, or a third-party meal delivery service. Delivered items can include entrees, sides, drinks, desserts, or grocery items, typically delivered in boxes or bags. The delivery person will drive a car in most cases, but in larger cities where homes and restaurants are closer, they may ride bikes or motorized scooters. In addition, autonomous vehicles have recently been used to make deliveries.

Customers can pay online or in-person, using cash or card, depending on the delivery business. For food delivery services, it is common practice to leave a tip. Contactless delivery is another possibility. Catering and wholesale food service deliveries to restaurants, cafeterias, health care institutions, and caterers via foodservice distributors are two other types of food delivery.

Future of Food Delivery App

In the previous two years, the food delivery industry has grown rapidly. Understanding potential future food delivery markets can help you orient your business to take maximum benefit as a restaurant. By utilizing the most recent hot trends, you may outperform your competition and promote your brand as a cutting-edge restaurant.

Figure 03: Future of Food Delivery App

According to Statista, revenue in the online meal delivery sector is predicted to rise by US$449,292m globally and US$45,332m in the United States by 2025. The Online Food Delivery sector in the United States is expected to grow 12.2 percent in revenue by 2022. **Reference: Online Food Delivery Future Income**

The fast growth of food delivery is due to several factors. First, Digital platforms such as **GrubHub**, **Uber Eats**, and **DoorDash** were already well-established, and delivery pickup was rapidly expanding. It introduced a more convenient and cost-effective ordering method than searching for a restaurant's menu and phoning them.

Another reason why the future of online meal delivery is now is that restaurants are adapting their business models to be more similar to retail. This is because the current consumer's always-connected lifestyles benefit from same-hour and same-day delivery. Besides managing internet delivery, many eateries have even built their own fleets.

At long last, the world's culture has shifted. Younger generations have embraced the smartphone culture, which allows them to accomplish almost anything with it. This cultural shift has influenced even earlier generations. Several reasons contribute to the expansion of the food delivery sector. Still, it comes down to a shift in mindset, restaurant buy-in, and the technology necessary to implement these delivery services efficiently.

Types of Food Delivery App Service

Food delivery businesses have recently received significant attention due to increased demand. A paradigm shift in the strategy of food delivery businesses is also occurring, from earning clients to knowing them. Understanding the four different sorts of food delivery services is therefore critical.

Figure 04: Types of Food Delivery App Service

Restaurant Prepared Food Delivery

This on-demand delivery business has thrown the traditional market into disarray. Social media references to such delivery services have risen dramatically due to the COVID19 epidemic. Ordering, cooking, and delivery are the three essential components of a meal experience that are handled. While just a handful manages all three fundamental activities, the majority are in charge of collecting orders, passing them on to partner restaurants, and finally delivering them to clients. Restaurants have teamed with companies like JustEat, GrubHub, and FoodPanda, who then deliver the meal to customers. Fast food franchises such as PizzaHut, Domino's, and McDonald's, on the other hand, handle everything themselves or use third-party applications to take orders and deliver them.

Meal Kits Delivery

This market is served by companies such as Blue Apron and Freshly. According to Grand View Research, this market is expected to reach USD 20 billion by 2027, mostly used by overworked families. There are two types of meal kits available: heat and eat and cook and eat. However, fresh, wholesome, relevant meals can only appeal to clients dealing with delivery slot challenges. **Reference: [Online Food Delivery](#)**

Grocery Delivery

During the pandemic, the grocery delivery company had a sharp increase, expected to continue in the coming years. Typically, a web portal or app delivers groceries to clients from a warehouse or offline shop where the products are stocked. An online grocery marketplace is often built by partnering with a few local grocery producers/retailers who will ultimately offer their items on the platform. The category is dominated by Peapod and Instacart.

Veggie Box Delivery

Subscriptions to vegetable boxes are becoming more popular. These can be anything from Community-Shared Agriculture (CSA) boxes to branded vegetable and fruit boxes. Over 500 British veggie box companies sent 3.5 million boxes of fresh vegetables to homes during the lockdown, more than double their regular sales. Due to high demand, popular UK vegetable box providers like Farmdrop and Riverford have to implement online queues. During the pandemic, the sales of veg boxes at Farmers Box and Misfits Market in the United States increased dramatically. **Reference: Online Food Delivery**

How do Food Delivery Apps Make Money?

There are various ways for online food delivery marketplace firms to earn or generate income from the food delivery marketplace platform.

Figure 05: How do Food Delivery Apps Make Money

Commission on Food Orders

As the platform owner of food delivery applications, you can charge a predefined commission in the form of a specific sum or percentage on each order placed on your platform. For example, you might assign or negotiate various commissions with different eateries to give your platform out for free. Still, you will commission each order to generate income from food delivery services to cover platform costs.

Presenting a Restaurant on Your Platform

The restaurant spent a lot of money advertising its restaurant meal menu. As a platform owner, you charge them to include restaurant listings in prominent locations so that their brands may be advertised on your online and smartphone platforms.

Delivery Charges

Some restaurants do not wish to recruit their delivery personnel. Instead, they want to use your delivery workers for their deliveries, and they will pay your delivery fees. You can engage your own delivery workers to make deliveries and charge delivery fees based on the number of orders placed with eateries.

Convenience Charge

You can charge a convenience fee to people who place orders on your online delivery marketplace platform, in addition to restaurant customers. However, this is a small fee for each order. Users gladly pay them since they can utilize your platform without leaving their homes or business.

Payment Gateway Charges

Payment gateway businesses can be bargained with regarding their fees for online payments. Because you possess a platform and have a high volume of daily transactions, they will provide you the best transaction price, and you may charge more from your restaurant enterprises.

Subscription Earning Opportunity

As the owner of reliable On-Demand Food Delivery Marketplace solutions, you will have two subscription-based income models. To begin, you may devise strategies for a restaurant firm to limit the number of food menus, food orders, placements, highlighted listings, separate branding assets such as mobile applications, social media marketing, etc. Customers may be offered a variety of discount options, monthly subscriptions for accumulating reward points, etc. And bill them monthly, quarterly, semi-annual, and annual.

Advertising Third-party Related Services on the Platform

Because of the large exposure to your traffic on your platform, you have the option to charge related businesses high advertisement prices to display their banners or listings on your online and app platforms.

Marketing Campaigns

You can provide several plans for restaurant marketing initiatives. For example, restaurant owners do not have enough time to undertake social media or email marketing because of the nature of the restaurant company. So you may offer them several options for that and advertise their business to gain more consumers and orders.

Text / SMS Marketing

You have many restaurant customers and the capacity to buy large amounts of text or SMS services from any reputable supplier. You may offer these credits to restaurants for a fair price to help them market their establishment.

[Build your Food Delivery App](#)

[Hire a Food Delivery App Developer](#)

How Does a Food Delivery App Work?

People who want to eat at the restaurant but don't want to go might use online food ordering and delivery services to relieve their tension. It's easy to order food online. People who want to dine at a restaurant but don't want to go might use online food ordering and delivery services to relieve their tension.

Figure 06: How Does a Food Delivery App Work

 Here's how it works when you order food online:

- Customers search for meals and restaurants through the app.

- The customer selects their preferred restaurant and food and then places it in their food cart.

- Customers submit orders after choosing a payment option such as net banking, cash on delivery, or debit card.

- The customer is then notified of the status of their order.

- The delivery person is contacted once the customer's order preparation is complete.

- The delivery boy now picks up the order and delivers the meal to the customer's address with delivery tracking.

Key Challenges of Food Delivery App Development

As more people order food online, the industry becomes increasingly competitive and tough. However, businesses will be able to stay afloat if they can identify and handle these difficulties. Let's look at the key issues that the existing companies in the food delivery industry are facing.

The Shift in Customer Preferences

The major focus of the food delivery business should be on increasing market share by providing the highest possible value to clients at the lowest possible cost. Unfortunately, existing companies have raised the marketing game that clients are spoiled for choice, even as competition rises, causing customer base instability and undermining brand loyalty. Food delivery companies use marketing strategies and methods to enhance engagement and propagate word-of-mouth to reduce client churn.

Fluctuating Market Prices

Food-preparation raw material prices are likewise quite variable. Getting the proper pricing and capturing customers' attention is a major difficulty in this situation. High operational costs exacerbate the concern and, as a result, harm profitability.

Adhering to Quality Standards

Businesses try to maintain food quality standards due to the significant increase in online orders. However, there will always be a difference between food served fresh in a restaurant and food delivered to customers' doorsteps after a short journey. Therefore, businesses must find creative methods to handle this.

Improper Handling of Food

The industry's current main difficulty is mishandling of requested food products. Only a few businesses have taken the necessary steps to solve the problem. Because hygiene issues send away many clients, they must be handled cautiously. It is critical to provide good training to ground employees, and businesses should invest in this.

Logistical Challenges

A significant portion of the business is dependent on the logistics department's ability to serve a larger geographic area effectively. While guaranteeing optimal food quality, allocating the necessary crew and the right number of vehicles is critical. Last-mile delivery is critical, and businesses should pay attention to it to keep their consumers pleased.

Why do Companies Want a Robust Food Delivery Tracking System?

While the food delivery company is growing in popularity, its success and equity will be primarily determined by its tracking system's effectiveness since much will depend on last-mile delivery. Therefore, we have expanded the characteristics to demonstrate why such a strong system is required at this time.

Figure 07: Why do Companies Want a Robust Food Delivery Tracking System

Ensured Delivery Security

When all the food delivery firms are busy wooing consumers, a tiny blunder such as missing or misplacing a shipment may harm the company's image, leading the irritated customer to badmouth. However, real-time tracking might be useful in ensuring the safety and traceability of the item that leaves the kitchen. Customers will also understand the cause of the delay depending on the product's location by expanding the options for tracking the carriers giving a warranty for safe delivery. Having a local warehouse at each distribution location is critical to ensuring the safety of the items while they are in storage.

Route Optimization

It is critical to optimize the delivery location since it ensures a seamless procedure. Route management software assists in analyzing specified routes and provides the assigned driver with an optimal solution. To some extent, this reduces delivery time and costs. Drivers are calmer when delivering food boxes with the help of this technology,

and the operation is completed faster than planned. Because of ensuring quicker processing, special algorithms assign the best driver for the route.

Activating Automatic Dispatching

Products may be automatically shipped with little operator involvement using real-time tracking software. The computer assigns the driver and delivery people for each package using a precise algorithm. The entire procedure is run via these algorithms, from dispatch to delivery to preserve speed. During the current epidemic, this strategy assisted in the practice of social distancing. Customers can also get advance notice of the delivery date and time and further information on any delays.

Gain Better Control via Tracking

Thanks to online tracking technologies, consumers can receive their items on time and connect with the delivery employee if necessary. Last-mile delivery services must include tracking and tracing. It also aids in route management and automatically generates batch delivery systems with no operator involvement. This, in turn, accelerates the process, and they are especially effective when there is a shortage of staff in specific scenarios.

Quick Customer Responses

Customer input is crucial; hence some real-time tracking software includes this feature. This feedback data is then examined and used to improve company services to gain traction. The voice of the client can genuinely bring out weaknesses in the system.

Benefits of Food Delivery App Development

Despite the pandemic coronavirus, Statista reports that deliveries earned at least $107.43 billion in 2019 and will make $122.74 billion by 2020. By 2024, revenues will have surpassed $156 billion. **Reference: Online Food Delivery Income Statistics**

Figure 08: Benefits of Food Delivery App Development

So, not only for financial benefit but also there are so many benefits of developing a Food Delivery App are given below:

White Label Solution

You'll obtain a white label solution to make official business logos and issues more appealing to your target audience.

Easy to Use

Everything has been made simple, from the meal ordering app to the administrative panel.

One-Time Cost

This is a one-of-a-kind investment that will pay off in the long run. Successful platforms can be commercialized in the future for bigger earnings.

Time & Cost Efficient

We currently have a basic food ordering app solution, which implies a faster time to market and cheaper development expenses.

Take Charge of Code

You will be able to acquire the whole source code after the project is done and payment has been received. We follow rigorous NDA requirements when it comes to ownership of source code.

Technical Assistance

Free technical assistance will be supplied for the following six months, including bug fixes and other necessary basic upgrades.

Customizable and Expandable

Our award-winning Food Delivery App Development platform is fully customizable and responsive to any updates or integrations.

On-Demand Expertise

While designing on-demand apps, you gathered several crucial insights that enabled us to create reliable solutions.

Third Parties Integrations

Use your own delivery network or partner with a reputable logistics supplier in your region.

The Global Solution

Launch your Food Delivery App in several areas, including currency and language compatibility.

Accept Payments Anywhere

It includes your recommended payment gateways and built-in support for the most common ones.

Tips You Should Keep in Mind Before Creating Food Delivery App

Invest in your company's future to guarantee that you can keep up with the latest online food delivery trends. Revel Systems has options to diversify your revenue sources,

develop efficient procedures, and allow seamless transitions from a consumer making an order to receiving their meal.

Figure 09: Tips You Should Keep in Mind Before Creating Food Delivery App

Here are the tips that people should know before creating Food Delivery App-

Market Analysis

You must first identify your target audience and study your rivals before developing a Food Delivery App. By putting it another way, your rivals can target busy people interested in healthy eating for a younger audience by luring them to fast food.

Grow the User Base

You need to focus on your growing user base before building a food delivery app. It will help you to know the target customer. Here begin simply with:

- Operate your app in a local region to test your company concept and fast gain early adopters.

- Use various advertising channels, such as public relations technology, social media, inbound marketing, referral programs, etc.

- Collaborate: Because small and major merchants have already established a following, don't hesitate to team up with them to promote your expanding brand.

Retain Clients

Customer service should be flawless. Make it a point to quickly, helpful, and pleasantly answer your users' issues. Launch special offers: people love discounts, gifts, and coupons.

Features of Food Delivery App Development

Creating a food delivery app isn't enough. To make the platform function for all stakeholders, you must create a full ecosystem. We've compiled a comprehensive list of features that every modern meal delivery system or ordering platform should include. A typical **Food Delivery Application** is divided into four sections:

Figure 10: Features of Food Delivery App Development

Customer App Module

The most important part of the project is the client application. You need to establish a user-friendly UI/UX design to attract more people. Of course, the functionalities of various apps may differ. However, each application has MVP features for distribution on demand.

Registration and login

Making the procedure quick and easy is preferable to providing numerous registration choices. Registration using social media sites such as Facebook or Google is advised. You must also provide an email address, a password, and a phone number for registration. The "Forget Password" option is also required. Facebook SDK and Google SDK must be used by developers.

Nearby Restaurants

Based on the user's location, it allows them to see all of the top and closest eateries. Users may also examine the menu, pricing, reviews, and place an order. It's also good to include filters to help with the search process.

Restaurant Menu

Users may utilize this tool to quickly access the restaurant menu. In addition, they may view the restaurant's menu after they have chosen one. Alternatively, consumers can search for a certain dish. It will then display all of the eateries that serve such dishes.

Order Tracking

Customers can track their food orders on a geolocation map thanks to Google Maps integration, which ensures package delivery. Users may also see how long it will take a driver to arrive. This contributes to the development of confidence in the food-on-demand service.

Multiple Payment Options

Payment gateway integration allows users to pay for their food orders online using Debit/Credit Cards, Internet banking, and other methods. On the other hand, Restaurants may simply receive funds using payment gateway integration such as PayPal, Stripe, Bkash, Nagad, VISA card, etc.

Order History

Users find that order history is a time-saving tool. They may use it to manage and examine their previous orders. Furthermore, they can repeat past orders as needed.

Reviews and Ratings

Customer feedback and ratings play an important role in creating fierce market rivalry. Therefore, you should include this feature that allows customers to rate and review your app so that you can resolve issues and win their hearts.

Delivery Person App Module

The Driver Person app should be fast and easy to use. Because drivers prefer to utilize applications on the move, it's ideal to solely provide a mobile version. Therefore, you must include the following features:

Registration & Login

This allows drivers to log in or join the app using their phone numbers, Gmail addresses, or other social media accounts. The entire register or login process should be simple for new members.

User Profile

A driver may use this user profile to publish personal information such as their name, email address, contact information, photo, etc. As a consequence, customers will have an easier time recalling important information.

Alert and Notification

On the other hand, this function notifies drivers of any new orders that have been given to them. When the drivers are not using the delivery app, a sound alert for the orders that have been requested should be received.

Manage Multiple Deliveries

Drivers may be handling and responding to various food delivery orders simultaneously. Therefore, any request near another delivery place will be accepted.

GPS Map Integration

One of the most important and fantastic tools for a delivery person is GPS Map Integration. The meal delivery person is addressed by GPS, which suggests the most convenient routes. For example, if a delivery worker is forced to add a last-minute item, he will need to take a shorter route to arrive on time.

Call/Chat Option

If a customer has an issue, the delivery person can contact them through chat or phone. This feature can be directly connected with your calling application.

Order History

The delivery agent may access their food delivery order history and payment data with this function. The delivery person can edit their own history.

Restaurant App Module

This technology enables restaurants to manage incoming orders. Typically, an online solution rather than a mobile app is developed. It enables restaurant personnel to receive orders and tell couriers when they are ready.

On-demand application developers should provide the following features:

Registration and login

Every employee must have an account for the service to be secure. You may use the Facebook SDK or the Google SDK to create the registration feature.

Manage Business Info

This feature is so important for restaurant apps. When you have all of the details on your screen, you can better manage and make smart decisions.

Manage Menu

Restaurants working with it can change prices and quantities and update and add goods. In addition, employees may change the menu using the restaurant app to keep it updated.

Order Alerts

When the order is placed, the restaurant is notified in real-time and may begin processing it. It will help them to maintain their orders in time.

Manage Orders

Employees should be able to manage themselves in several ways, such as taking orders and altering their status.

Payment Management

This feature is for the restaurant to maintain their payment. They can check all successful and pending payment details to better manage accounts and settlements.

Reply To Reviews

This feature can show you the reviews and restaurants may respond directly to customers, build loyalty, and benefit from educational opportunities.

Admin App Module

An admin panel is a necessary tool for running a company. Here are a few characteristics that should be included:

Performance Analysis

An admin may keep track of all of the activities that users and delivery people do on the food delivery app. They can keep track of food deliveries, drivers, and scheduled/canceled orders via the admin dashboard and access driver details.

Manage Order Requests

Everything is under your control, from food parcel pickups to delivery and scheduled orders. You're responsible for keeping orders as easy as possible and delivering them on time to clients.

Real-time Update

The administration must keep track of the availability of delivery agents and eateries. This tool allows you to receive real-time updates and notifications regarding drivers and restaurant owners, such as profile updates, restaurant hours, and availability.

Payment and Commission Administration

The payment and commission rates for each food order may be managed using this admin interface by food delivery agencies and restaurants.

Offers and Discounts

It enables the app's administrator to give various discounts and promo codes. These offers are for customers and also for restaurants. This feature may help the admin to grab their target audience.

Restaurant Management

This tool can assist the restaurateur's activity management. It gives the app's administrator the ability to add and remove eateries.

Campaign Management

This feature can help the admin to manage the customer's activity. The administrator may launch and manage various email, SMS, and social media marketing campaigns.

Tech Stack of Food Delivery App Development

The tech stack you choose for your food delivery app company will determine its success. The efficacy of development technologies aids in the creation of a scalable meal delivery app.

Backend Technologies:

Function	Technology	Benefit

Server	Nginx	Nginx, a traffic expert, assists in effectively manag
Frameworks	Laravel	People prefer Laravel because it is extremely sec
Database	MySQL and Redis	MySQL is a high-performance database that is ea On the other hand, Redis' unique hashing metho
Hosting	AWS and VULTR	The developers may upscale or downscale any a

Chart 02: Backend Technologies of Food Delivery App Development

Front-end Technologies:

Function	Technology	Benefit
Cross-Platform	React and Flutter	React is lightning quick and allows us to create a one-of-a-kind ap enables us to produce well-designed and engaging solutions for b
iOS	Objective-C and Swift	Designers choose Objective C and Swift to build iOS-based produ technologies' most recent improvements and updates as the leadi
Android	Java and Kotlin	Java's sandboxing and ability to construct highly secure solutions simple to maintain.

Chart 03: Front-end Technologies of Food Delivery App Development

Food Delivery App Development Process

Initially, developing a food delivery app is a good concept. A knockoff of a popular solution, on the other hand, won't go you very far. The key to developing a successful application is to design a one-of-a-kind solution that solves the concerns of the target consumers.

Figure 11: Food Delivery App Development Process

In this portion of the article, we'll go through how to make a meal delivery app that has a better chance of succeeding.

Idea Develop and Describe

You must first explain your product concept. Describe how you want your product to appear, what features and designs it should have, and how it should perform. Every

successful product begins with a brilliant concept. It will be easy for you to build a strategy and communicate it to your staff.

Marketing Research

After that, conduct some market study to determine if people will use your product, whether they will, for example, pay for it, and whether your application will solve certain problems. After completing your research and receiving your findings, you may go to the design step.

UX Design: Prototype, Logic, and Navigation

You must create a product prototype, logic, and navigation at this level. An application prototype is a thorough blueprint. Before going on to graphic design, it's important to concentrate on the meaning and think through the interface conceptually. A well-designed prototype serves as a full-fledged application foundation, allowing the design to be simply "placed on top."

Always keep logic and navigation in mind when prototyping. The user will most likely cease using your product if the sequence of activities in the application is not logical or the navigation is difficult.

Testing

You must test the UX design after it has been completed. Specifically, you should test each activity done in the application and their consistency and navigation. The more testing time you have, the better. During testing, you will be able to remedy any problems that may have occurred. It's preferable to do it now rather than later when your product will be actively used.

UI Design: Design Style and Elements

The goal of UI design is to create visually appealing and interactive interfaces. In addition, the UI designer's goal is to create an interface that is easy to use and pleasing to the sight.

UI design refers to the aesthetic considerations while producing a product, such as an image, button, menu bar, or footer. All of these variables will influence the user's involvement. As a result, they must be carefully evaluated.

Food Delivery App Development Life Cycle

Now you must turn the design into a functional product. The entire process of developing a meal delivery app was broken down into numerous parts.

Product Technical Documentation

During this stage, all necessary information from the customer is gathered to produce a product that meets the client's expectations and requirements. In addition, the team should create technical documentation and technical stacks.

The team should also establish the needs for functionality (requirements for the admin panel) and user roles at this point (admin and super admin). Finally, the team should complete the estimate and scope of work.

QA

After check the technical document, all provided code is tested by QA engineers, and created components are also manually tested. QA team will again run the programme to check the error.

Deployment & Integration

After development and regression testing, the QA team shifted to production deployment and integration. Users are given the tested version of the product to test. The team gathers user input, addresses all issues, and makes some changes.

Maintenance

Following the product deployment in the production environment, the development team is responsible for product maintenance, i.e., if a problem arises that has to be resolved, or enhancements need to be made.

Food Delivery App Development Cost

The actual cost of establishing a food delivery app is determined by various criteria, including the type of app, the type and quantity of features and functionality, labor, etc.

Figure 12: Food Delivery App Development Cost

On average, the cost of establishing a basic food supply app ranges between $10,000 and $18,000. A high-end program with cutting-edge capabilities, on the other hand, may cost you up to $40,000.

Labor expenditures are a major issue in determining development costs. Working costs differ from nation to country. Developers from the United States/United Kingdom, for example, charge between $70 and $250. For developers based in Eastern Europe, hourly wages range from $50 to $170.

A professional firm will provide you with an overall estimate breakdown so that you can completely investigate the project's feasibility. So we've covered all you need to know right now to enter the market for on-demand food delivery apps and estimate the potential cost of an online meal delivery app. Now is the moment to start planning for the future.

Knowing what the food delivery app industry has in store will put you in a better position to approach your choice mobile app development business with a request to grow your app to meet the food delivery future.

Conclusion

If you want to establish an on-demand food delivery app as a company owner, you must conduct extensive market research, get industry knowledge, and set a reasonable budget. As a result, we've included:

- On-demand food delivery features.

- Business models.

- Revenue methods.

- Technologies in this guide help you create the best meal delivery app possible.

So, before designing a feature-rich food delivery app, it's vital to understand which food delivery market you want to target, the difficulties you'll face, the hurdles you'll face, and your ultimate goal.

HOW TO START A FOOD DELIVERY SERVICE FROM SCRATCH?

It's impossible to walk down the block nowadays without seeing a courier passing by, clutching two warm bags of Chinese food, Mexican tacos, or something else.

With so many hungry customers getting their favorite meals hand-delivered to their doors, it's no wonder starting your own food delivery service looks like an enticing business opportunity.

But, the looming question remains: **how to start a food delivery service** from scratch amidst such fierce competition?

In the post, we'll outline key steps to help you launch a successful food delivery service that stands out from the crowd.

So, before you put in the elbow grease and dive headfirst into late-night menu planning, consider our guide to be a handy manual for your entrepreneurial journey.

Step 1: Analyze the Food Delivery Market

Starting a food delivery service from scratch is no small feat. It requires careful planning. And, careful planning requires a thorough analysis of the food delivery market.

Current market trends reveal consumer preferences and emerging technologies, while statistics provide insights into potential profitability and target demographics.

On the other hand, conducting a SWOT analysis helps identify strengths, weaknesses, opportunities, and threats within the industry.

This comprehensive understanding enables entrepreneurs to make informed decisions.

Market Trends and Statistics

The food delivery industry is booming, and it's showing no signs of slowing down.

Here's what you need to know:

The global online food delivery market is expected to reach $200 billion by 2025. In fact, the market is projected to grow at a CAGR of 9.04% from 2024 to 2029.

User penetration is also on the rise, with estimates suggesting that over 2.5 billion users will be using meal delivery services by 2029.

But, who's ordering all this food? Millennials and Gen Z are leading the charge. They're tech-savvy, busy, and always on the lookout for new culinary experiences.

But don't discount other age groups – everyone loves a good meal delivered to their door. Moreover, the pandemic led to an increase in adoption across all age groups.

SWOT Analysis

A SWOT analysis can help you understand your position in the market when **starting a food delivery business**. It involves evaluating your strengths, weaknesses, opportunities, and threats.

Let's look at a hypothetical example of a new **food delivery business**:

Strengths:

- Innovative technology platform
- Strong partnerships with local restaurants
- Eco-friendly packaging

Weaknesses:

- Limited initial capital

- Lack of brand recognition

- Small delivery fleet

Opportunities:

- Growing demand for healthy meal options

- Expansion into suburban areas

- Integration of AI for route optimization

Threats:

- Established competitors with large market share

- Potential economic downturn affecting discretionary spending

- Changing regulations in the gig economy

By conducting a thorough SWOT analysis, you'll be better prepared to navigate the challenges and capitalize on opportunities in the food delivery market.

Note: It is important to regularly reassess your position and make adjustments as needed.

Get data-driven insights for the food industry & boost your profit margins by up to 18%.

Book a call

Step 2: Pick The Right Delivery Business Model

Let's explore the different ways you can structure your food delivery service:

Option #1: Order and Delivery Model

In this model, you prepare the food and partner with **restaurant food delivery companies** to handle the logistics. Popular apps like Uber Eats, DoorDash, and Grubhub connect you with hungry customers.

Choosing the right platform is crucial. Consider factors like commission rates, customer reach, and user interface. Some platforms specialize in certain cuisines or cater to specific demographics and locations.

Do your homework to find the best fit for your restaurant food delivery service.

Option #2: Full-Service Model

This is the DIY approach of restaurant food delivery companies. You handle everything from food preparation to delivery. It gives you complete control over the customer experience, but it also means more work.

Examples of successful full-service models include Papa John's and Domino's. They've built a loyal customer base through consistent quality and reliability.

Option #3: Cloud Kitchen Model

This is a newer concept. You operate a kitchen solely for delivery orders.

Unlike the other two options, where you may have a physical dining space besides food delivery services, a cloud kitchen focuses exclusively on fulfilling delivery orders.

Companies like CloudKitchens are pioneers in this space. This model is a great way to minimize overhead costs.

Here's a comparison of the pros and cons for each model to help you understand which structure may be the best for your **restaurant food delivery services**:

Model	Pros	Cons
Order and Delivery	• Lower startup costs • Simpler operations • Access to existing customer base	• Lower profit margins • Limited control over fo___ delivery
Full-Service	• Complete control over process • Potential for highest profit margins	• Highest startup and op___ • Most complex to mana___
Cloud Kitchen	• Lower overhead costs • Flexibility to experiment with menus	• Limited brand visibility • Reliance on third-party

Step 3: Consider Legal Requirements, Safety & Quality

Now that you've chosen your model, it's time to tackle the nitty-gritty. Legal requirements and safety standards are crucial for any **food delivery business**.

Acquire Relevant Permits and Licenses

Let's take a look at the relevant permits and licenses you need to be able to start **food delivery services**:

- **Business Registration and Structure:**

First things first, you'll need to register your business. Choose a structure that fits your needs – LLC, corporation, or sole proprietorship. Each has its own tax implications and liability protections.

- **Food Safety Certifications:**

Food handling certifications are a must. Look into ServSafe or similar programs recognized in your area. These courses cover critical food safety principles.

- **Health Department Permits:**

Your local health department will require permits for food preparation and handling. They'll likely want to inspect your facilities before giving the green light.

- **Vehicle and Driver Licensing:**

If you're opting for the full-service model, make sure your vehicles and drivers meet local requirements. This might include commercial driver's licenses and vehicle inspections.

- **Insurance Requirements:**

Don't skimp on insurance. You'll need coverage for your business, vehicles, and potentially product liability. It's better to be over-prepared than caught off guard.

The above guidelines provide a general overview of the permits and licenses required to start food delivery services in many countries.

However, specific regulations may vary by location. Research local laws and requirements to ensure full compliance with your area's unique stipulations.

Ensure Food Safety and Quality

Food safety isn't just about avoiding legal trouble – it's about keeping your customers happy and healthy.

Implement a checklist system for each order to maintain safety and quality:

- Ingredient freshness check

- Cooking temperature verification

- Portion size consistency

- Packaging integrity inspection

- Order accuracy confirmation

Packaging is another crucial factor. Your food needs to arrive hot, fresh, and appetizing. Invest in quality containers that maintain temperature and prevent spills.

Nobody wants a soggy burger or a lukewarm pizza!

Step 4: Develop Your Own Food Delivery Concept

Now comes the fun part – creating your unique food delivery concept.

To start, consider what makes your food delivery service special. Maybe it's your grandmother's secret recipe, or perhaps you offer the fastest delivery in town.

Find that special something that sets you apart.

Identifying your target audience is the next step. Are you catering to busy professionals, health-conscious individuals, or late-night snackers?

Understanding your customers helps you tailor your offerings and marketing.

Next, create a menu strategy. Consider factors like ingredient availability, preparation time, and how well items travel.

Finally, your pricing strategy can make or break your business. Calculate your costs carefully, including ingredients, labor, and delivery expenses.

Set prices that are competitive but still allow for healthy profit margins.

Remember, sustainability is key in the **restaurant food delivery companies'** world.

Step 5: Set Up Kitchen Operations

Your kitchen is the heart of your food delivery service. There are three critical components of setting up kitchen operations.

Invest time in perfecting these components, and you'll be well on your way to mastering how to start a delivery food business.

Select Your Space

Selecting a kitchen space is a big decision. You have two main options: traditional or cloud kitchen.

Traditional kitchens are what you'd find in a typical restaurant. They're great if you plan to offer dine-in services too.

Cloud kitchens or ghost kitchens, on the other hand, are delivery-only spaces. They're often more cost-effective and flexible.

To learn more about ghost kitchens and how to choose between a ghost kitchen and a traditional restaurant, check out our post — How Does a Ghost Kitchen Work: From Concept to Delivery.

Also Read: Ghost Kitchen vs Cloud Kitchen: Which Makes More Money?

Equip Your Kitchen

Next, equip your kitchen. Prioritize efficiency and food safety. Essential items include:

- Commercial-grade refrigeration units

- High-capacity ovens and stovetops

- Food processors and mixers

- Proper ventilation systems

- Sanitization stations

Streamline Workflow & Improve Service

Create a streamlined workflow that minimizes cross-contamination risks. Implement a system where ingredients move from storage to prep to cooking seamlessly.

Moreover, customer feedback is gold in the **food delivery business**.

Set up a system to collect and respond to reviews. Use software tools like SurveyMonkey or Google Forms to gather insights about your food quality and delivery experience.

Address concerns promptly and use feedback to improve your service.

Happy customers are repeat customers!

Step 6: Develop Your Online Presence

Your restaurant's online presence is as crucial as your physical location. Let's dive into the key elements that will make your virtual storefront shine.

Create a User-Friendly Website

Your website is often the first impression customers get of your restaurant.

Make it count!

A user-friendly site should be easy to navigate and visually appealing.

Essential features for online ordering include:

- Clear menu display

- Customization options

- Streamlined checkout process

- Integration with payment gateways

- Mobile responsiveness.

Remember, hungry customers don't have the patience for complicated ordering systems. So, ensure that your website provides a seamless experience from start to finish. If you're looking for the right tools to streamline your online orders, check out our guide on the [11 Best Online Ordering Platforms to Boost Restaurant Orders](#).

Build or Partner With a Food Delivery App

Once you have the website, it's time to think about the app.

You could either build your own delivery app like Domino's or partner with platforms like DoorDash and Uber Eats.

The decision depends on various factors and both options have their opportunities and challenges.

Let's break it down:

Build Your Own App	Partner with Existing Platforms
Full control over user experience	Wider customer reach
Higher initial investment	Lower upfront costs

Build Your Own App	Partner with Existing Platforms
Customization options	Established infrastructure
Longer development time	Quicker implementation

If you decide to build your own app, here are some key features to consider:

- User experience
- Intuitive design
- Easy to use
- Navigate through the menu
- Easy order placement
- Seamless delivery tracking.

Your app should also seamlessly connect with your restaurant's POS system and inventory management.

Note: App development costs and timelines vary widely. On average, expect to invest $30,000 to $100,000 and 4-6 months for a basic food delivery app.

Build Your Delivery Fleet

Before we talk about how you can build your own delivery fleet, let's address a more pivotal concern:

Do you really need your own fleet when **starting a food delivery business**?

Not really, if you're partnering with food delivery platforms such as Uber Eats since they happen to manage the delivery logistics on their own.

However, if you decide against partnering with such platforms, you need your own fleet.

To get started, vehicle selection is important. Motorcycles are great for quick, urban deliveries.

Cars are better for larger orders or suburban areas. Whatever you choose, prioritize fuel efficiency and reliability.

Also, think about adopting a holistic approach that includes environmental sustainability and social responsibility.

E-bikes, for instance, offer an excellent eco-friendly option for short-range deliveries, typically within a 10-15 mile radius. They not only reduce carbon emissions but also help navigate through congested urban areas more easily.

Hiring and training delivery drivers is another key step. Look for punctual, polite individuals with clean driving records. Train them on food safety, customer service, and efficient route planning.

Finally, implementing route optimization and tracking systems can significantly boost efficiency.

Apps like Onfleet or Tookan can help manage your fleet. They offer features like real-time tracking and automated dispatching.

Market Your Food Delivery Service

Now that you've got your online presence set up, it's time to spread the word. Digital marketing strategies are your best friend here.

- Learn food photography or hire an expert. Post mouth-watering photos and respond promptly to comments and messages.

- Focus on SEO. Optimize your website and content for relevant keywords.

- Send out newsletters with special offers, new menu items, and behind-the-scenes content. Consider working with experts to make the most out of email marketing.

- Loyalty programs and referral incentives encourage repeat business and word-of-mouth marketing.

- Collaborate on special promotions or events to attract new customers.

- Implement promotional offers and discounts that can drive initial orders, but use them strategically to avoid devaluing your brand.

3X your order value with Restaurant Growth's omnichannel marketing.

Book a 1:1 call to learn more!

Step 7: Manage Finances & Pricing Carefully

Starting a food delivery service requires careful financial planning. Initial startup costs can add up quickly – from licensing to hiring staff and more.

To ensure a solid financial foundation, it's crucial to:

1. Develop a comprehensive budget that accounts for both one-time startup costs and recurring monthly expenses.

2. Maintain detailed financial records from day one.

3. Regularly review and adjust your financial projections as your business evolves.

Let's break down the key areas of financial consideration:

Initial Investment and Startup Costs:

- Vehicle acquisitions (purchases or leases)

- Food storage and handling equipment

- Delivery packaging materials

- Insurance and licensing fees

- Marketing and branding expenses

Ongoing Operational Expenses:

- Labor

- Fuel

- Maintenance

- Technology

- Marketing

To ensure profitability, it's crucial to develop effective pricing strategies that can help monitor and manage the above-listed costs effectively.

How to Price Your Food Delivery Service?

When pricing your menu items and delivery fees, aim for a 25-30% gross profit margin to maintain profitability long-term. Track metrics like revenue per delivery and average order value.

Adjust pricing as needed based on real data. During peak hours or high-demand periods, consider implementing surge pricing to maximize profits. Additionally, it's essential to keep an eye on competitor pricing and industry trends to stay competitive.

Financial forecasting and budgeting are also essential for long-term success. Tools like QuickBooks, Xero, or Wave can help you track expenses and revenue.

Use spreadsheet software for detailed projections and scenario planning. Regular financial check-ins will also keep you on track.

Need help getting the word out? Restaurant Growth offers affordable marketing solutions tailored for food delivery startups.

Get in touch

Step 8: Leverage Technology For Efficiency

In today's digital age, technology is key to running a smooth food delivery operation. Let's explore some must-have tools:

- **Order management systems:**

Order management tools can help you streamline the entire ordering process, from receiving orders to dispatching them for delivery.

- Uber Eats

- DoorDash

- Grubhub

- ChowNow

- Olo

- **Kitchen display systems:**

Kitchen display systems (KDS) can enhance communication between your front-of-house and kitchen teams, reducing errors and increasing speed.

- Toast KDS

- Revel Systems

- Square for Restaurants

- Lavu KDS

- TouchBistro

- **Inventory management software:**

Inventory management software is essential for keeping track of stock levels, reducing waste, and ensuring you can meet customer demand without overordering.

- MarketMan

- Upserve

- Orderly

- SimpleOrder

- BlueCart

- **Data analytics for business insights:**

Data analytics is crucial for identifying trends, understanding customer preferences, and making informed business decisions. Utilize these tools to adjust your restaurant's strategies:

- Tableau

- Google Analytics

- Looker

- Domo

- Power BI

Track your marketing efforts like never before with Restaurant Growth's advanced analytical dashboard.

Book a call to learn more!

Step 9: Learn To Navigate Industry Challenges

Running a food delivery service comes with its share of hurdles.

Given that more and more customers are consciously choosing to go green, opt for recyclable containers and cutlery to reduce plastic waste. Route optimization software cuts fuel consumption and emissions.

Next, manage fluctuating order volumes by staggering staff shifts and using on-demand drivers. Set policies for order cancellations and refunds upfront to avoid confusion.

Stay up-to-date on local regulations around food safety, zoning, signage, etc to prevent fines. Regular training for staff on these regulations will ensure everyone is informed and prepared.

Additionally, maintaining strong relationships with suppliers can help mitigate challenges around sourcing ingredients during high-demand periods or supply chain disruptions.

Top tax deductions for DoorDash, Grubhub, and Uber Eats drivers

Food delivery is here to stay. And you may be one of the many Americans working for these food delivery services, like DoorDash, Uber Eats, and Grubhub. If you are already doing this, or thinking of joining to make some spare cash, you may have questions about what you may have to pay in taxes. As part of our Deductions@Work® series, we're helping you with expert guidance on tracking business income and expenses, and more.

Key takeaways

- Delivery drivers are independent contractors rather than employees. That means companies do not withhold tax, and you'll receive 1099-NEC and/or Form 1099-K instead of a W-2.

- DoorDash drivers are taxed as independent contractors.

- DoorDash drivers will need Form 1099-NEC (Nonemployee Compensation), Form 1040 (U.S. Individual Income Tax Return), Schedule C (Profit or Loss from Business), and Form 1040-ES (Estimated Tax Payments) to file, as well as any mileage and expense tracking forms and receipts.

- Calculate your DoorDash tax using our Self-Employment Tax Calculator.

- Delivery drivers can deduct many different business expenses to reduce their taxable income, if they are both necessary and ordinary.

- You can deduct maintenance and repairs for vehicle upkeep.

- You can deduct the cost of snacks and drinks for your customers.

- You can deduct the cost of work supplies and equipment you need to do your job.

- You may be eligible to deduct premiums that you pay for medical, dental, and qualifying long-term care insurance coverage for yourself, your spouse, and your dependents.

- You may be able to deduct qualified unreimbursed medical care expenses that exceed 7.5% of your adjusted gross income (AGI).

As more and more people work in this part of the "gig economy," you may have questions about whether you're an employee or a contractor. We'll dive into the broad strokes of what it means to fit into these different categories, but you can always discuss the details of your employment with a Tax Pro. We'll also cover deductions related to your car, gas, and other important write-offs, as well as estimated tax payments to reduce any tax you owe at the end of the year.

Employee status vs. contractor status

- **Employees** generally receive regular paychecks with income, Social Security, and Medicare taxes withheld from their wages. At year-end, they typically receive a Form W-2 with information on the income earned for the year and total tax withheld.

- **Independent contractors** are typically considered self-employed. The companies that hire them don't withhold income or payroll taxes from their payments. You should receive Form 1099-NEC and/or Form 1099-K from whatever food delivery company you're working for or a credit card processor.

As a self-employed person, you will also need to include Schedule C with your tax return. You may need other forms, such as Schedule 1 or 2, Schedule SE, Form 4562, and others.

Whether you are due to receive a Form W-2, Form 1099, or both, you should receive your tax forms with your total earnings for the year by the first week of February. If you haven't received them by, reach out to the company or companies for whom you've been delivering food to see if you can download forms online, or if they can send the documents to you as soon as possible.

It's important to note that even if you haven't received the forms, you are still obligated to report any income earned throughout the year. Keep an independent record of all your earnings and make sure to compare what you receive and what you made.

If you're not sure which documents do or do not apply to you, Jackson Hewitt's Tax Pros can help you with how to proceed.

DoorDash Tax

Does DoorDash take out taxes? No. As a delivery driver, you are an independent contractor, and DoorDash will not withhold tax from your pay. That means you will be required to pay your taxes by making estimated quarterly tax payments, usually on April 15, June 15, Sept. 15, and Jan. 15 each year. You'll also get a Form 1099 from DoorDash, instead of a Form W-2.

DoorDash Tax Form

As a DoorDash driver, you will file as a self-employed person. Here's a breakdown of the tax forms you'll need:

- **Form 1099-NEC (Nonemployee Compensation):** DoorDash will send you Form 1099-NEC if you earned $600 or more. This form reports the total you've earned from DoorDash, which you'll need when you file your tax return.

- **Form 1040 (U.S. Individual Income Tax Return):** Form 1040 is where you'll report your annual income and expenses from DoorDash and the main tax form that all taxpayers are required to file.

- **Schedule C (Profit or Loss from Business):** Deduct business expenses relating to driving for DoorDash, like gas mileage, gas, or your phone plan, using Schedule C.

- **Form 1040-ES (Estimated Tax Payments):** You'll need to use Form 1040-ES to estimate your quarterly tax payments.

- **Mileage and expense tracking forms and receipts:** You won't need to file your mileage and expense tracking forms, but they can help you keep accurate track of your expenses and may be necessary if you are audited.

DoorDash Tax Calculator

Calculate your DoorDash tax using our Self-Employment Tax Calculator. Using the latest information from the IRS, including any annual tax law changes, this helpful tool can provide you with an accurate estimate of your self-employment tax.

Don't forget, as an independent contractor, you're entitled to many tax benefits and deductions that can help to lower your tax and could even result in a bigger tax refund. File your tax return with a Tax Pro to ensure that you get every credit, deduction, and dollar you deserve.

Deductions for delivery drivers

According to the IRS, deductible business expenses for taxes must be both necessary and ordinary. That means the expense must be:

- Common and accepted in your business or trade.

- Necessary for your business or trade.

Deductible business expenses may include the cost of goods sold, capital expenses, and other expenses. Keep the following potential business expenses for taxes in mind and save your receipts and records throughout the year to maximize your self-employment deductions.

Deducting miles for delivery drivers

If you use your vehicle for food delivery work, you can deduct maintenance and repairs for vehicle upkeep. This may include expenses, such as car payments, gas costs, oil changes, registration fees, insurance, parking fees, tolls, and depreciation (if you own the car or truck), new tires, or leasing costs.

You may choose the actual expense method or use the standard mileage rate. If you choose the actual expense method, you must also keep track of your vehicle-related expenses for the year. Vehicle-related expenses include gas, oil, insurance, repairs, cleaning, and registration.

Whichever method you choose, you must keep track of the mileage on your car from the first day of the year through the end of the year. Keeping a log of your miles in a planner, on a calendar or even in a spreadsheet will help to support your claim.

Meals and snacks deductions

Most of the time, you won't be able to deduct your meals and snacks on the go. You can deduct the cost of snacks and drinks, and the ice to keep them cold, you keep for your customers. You may also be able to deduct a meal with another delivery driver if the two of you are talking about the job and giving each other tips on the work, and so on. Always check with your Tax Pro about anything you want to claim and make sure that you're accounting for things properly.

Deducting equipment and supplies expenses

You may also need to think of different supplies you'll need to run your business and keep track of everything. Most businesses have two types of supplies. There are office supplies such as pens, pencils, notepads, calendars, etc. and work supplies that are specific to a job.

Keep track of your expenses for each job and for your office supplies. This will help you lower your income and self-employment taxes when it comes time to do your tax return.

Deducting health insurance premiums

As a self-employed filer, you may be eligible to deduct premiums that you pay for medical, dental, and qualifying long-term care insurance coverage for yourself, your spouse, and your dependents.

- This health insurance write-off is entered on Part II of Schedule 1 as an adjustment to income.

- Unlike an itemized deduction, this deduction treatment is beneficial because it lowers your adjusted gross income (AGI).

- Having a lower AGI can reduce the odds that you'll be affected by unfavorable phase-out rules that can cut back or eliminate various tax breaks.

Eligibility is determined month-by-month. You can only claim the health insurance premiums write-off for months when you, or your spouse, were not eligible to participate in an employer-sponsored program.

Unreimbursed medical expense deductions for delivery drivers

If you're itemizing deductions, the IRS allows taxpayers to deduct the qualified unreimbursed medical care expenses that exceed 7.5% of their AGI.

If you have an AGI of $50,000 and $10,000 in total deductible medical expenses, 7.5% of $50,000 is $3,750, and not deductible. You can deduct the remaining $6,250 of medical expenses as part of your itemized deductions.

The total itemized deductions (medical, taxes, interest, etc.) need to exceed the annual standard deduction for the taxpayer's filing status. The standard deduction amounts for each filing status are adjusted for inflation annually.

The Taxability of Third-Party Food Delivery Services

Understanding Complex Local Rules to Determine the Responsible Party

Two years into an unprecedented global pandemic, the impact of coronavirus (COVID-19) is still felt in many industries. The hospitality industry continues to be one of the hardest-hit. Although hotel occupancy is steadily rising as summer travel picks up, the restaurant industry struggles to reestablish its identity. The lack of workers, the lack of supplies, and the lack of customers all contribute. The National Restaurant Association

estimates that at least 90,000 restaurant locations were either temporarily or permanently closed as of mid-2021 (The 2021 State of the Restaurant Industry Mid-Year Update, National Restaurant Association, **http://www.restaurant.org**).

There is one bright spot: the use of third-party food delivery companies. Third-party food delivery companies—such as Uber Eats, Grub Hub, and DoorDash—have allowed restaurants to deliver prepared meals to their customers. Prior to 2020, this delivery service was seen as a convenience. Once businesses closed in 2020, this delivery service was seen as essential. Today, this delivery service is a permanent extension of restaurant operations. Restaurants and third-party food delivery companies continue to balance prices to ensure profitability for both parties. This balancing act often overlooks one of the most important aspects of a sale—the imposition of sales tax. Both parties should ask: Who is responsible for the collection/remittance of sales tax, and which fees are subject to tax? This article will provide an overview of the key issues that CPAs need to be acknowledge when consulting with businesses in the hospitality area.

To this end, third-party food delivery service companies partner with restaurants to use the service provider's digital platform to offer food delivery services to the restaurant's customers. Customers can access the digital platform using a website or app. Typically, customers browse the app, select a meal, and place an order; the restaurant will accept and prepare the order; and the third-party food delivery service company will link with an available delivery driver to facilitate the delivery service. The order receipt will show the price of the meal plus additional fees, such as the delivery fee, service fee, tax, and tips.

Some states consider the third-party food delivery service company to be a marketplace facilitator. A marketplace facilitator is a company or person who facilitates the sale of tangible personal property by a marketplace seller by providing a forum where the sale takes place and collects the receipts from customers for the tangible personal property. This broad definition emboldened states to look at third-party food delivery service companies to shore up state revenue. From a state tax department's viewpoint, the service provider offered the forum and (more than likely) collected the money. So why wouldn't the marketplace facilitator laws apply? It is much easier to collect tax revenue from one large taxpayer than thousands of small taxpayers.

New York

Take a look at New York. Generally, the receipts from every sale of food and drink when sold in or by restaurants, including the amount of such receipts of any cover, minimum, entertainment, or other charge made to patrons or customers, are subject to New York sales tax. This sales tax is imposed in all instances where the sale is for consumption on the premises where sold, or in those instances where the vendor or any person

whose services are arranged for by the vendor, after the delivery of the food or drink by or on behalf of the vendor for consumption off the premise of the vendor, serves or assists in serving, cooks, heats, or provides other services with respect to the food or drink [New York Tax Law section 1105(d)]. Although third-party food delivery companies offer an app to facilitate sales, they generally argue that they are not selling food; they are providing a delivery service only. New York does not impose sales tax on transportation services. The receipt may also include a tip, which can be either mandatory or voluntary. A mandatory tip is automatically added to the bill given to the customer. A mandatory tip is subject to New York sales tax unless the tip is separately stated, clearly identified as a tip, and all of the money is given to the employees. If all three conditions are not met, the mandatory tip is subject to sales tax; if the tip is voluntary and separately stated, it is not subject to New York sales tax (New York Tax Bulletin TB-ST-806, 04/08/2019).

In addition, New York offered guidance that a marketplace provider is not required to collect sales tax on transactions that are not considered the sale of tangible personal property, such as sales of restaurant food [New York Technical Memorandum TSB-M-19(2.1)S, 10/17/2019]. The restaurant is responsible for the collection and remittance of the sales tax; however, third-party food delivery companies may opt to accept responsibility for the collection and remittance of sales tax through its contract with the restaurant. Although not required, the restaurant may accept a copy of a fully completed New York Form ST-150, Marketplace Provider Certificate of Collection, from the provider; this form offers tax liability relief to the seller. Remember that the state does not consider the sale of restaurant food as the sale of tangible personal property. This form, in addition to the contract, is simply stored to substantiate why the restaurant did not collect and remit sales tax on its third-party delivery sales. Both parties should pay attention to any contract clauses that reference restaurant-related sales taxes. Interestingly, as of this writing, the Uber Eats website shows that it is collecting sales tax in New York (**https://bit.ly/3scARpW**), but the DoorDash website shows that it is not (**https://bit.ly/3w6CGpw**).

California

California does not consider third-party food delivery companies to be the marketplace facilitator responsible for collecting and remitting sales tax. However, a third-party food delivery company can choose to be a marketplace facilitator. If the company chooses to be a marketplace facilitator, that company is then responsible for the collection and remittance of tax. If the company does not choose to do so, the tax obligation remains with the restaurant. It is important that the restaurant and the online ordering service provider have a written agreement that adequately describes the responsibilities of each party involved. It should be made clear whether the online ordering service provider is

acting as an agent of the restaurant in the advertising, ordering, and delivery of the meal, or whether the online ordering service provider is purchasing the meals for resale.

Under California law, when an online ordering service provider acts as an agent of the restaurant, the restaurant is considered the retailer of the meals sold through the online ordering service and is liable for the tax, measured by the full selling price of those sales, without any deduction of the commission retained by the service provider. If the agreement between the restaurant and the online ordering service provider does not establish an agency relationship, however, such a provider would be considered a retailer that is required to hold a seller's permit and is liable for the tax on the sales of meals through the online ordering service. When an agency relationship does not exist, the restaurant must obtain a resale certificate from the online service providers that purchase the meals for resale. The receipt may also include a tip. Payments of tips are not taxable if they are paid by customers on an entirely optional basis and are retained by employees (California Publication 22, Dining and Beverage Industry, October 2020).

Other Issues and Responsibilities

The focus above has been on state sales tax. What if the cities or counties in the relevant jurisdiction have a local restaurant related tax? In Indiana, counties or municipalities that have been granted the necessary statutory authority may adopt a local food and beverage tax. The food and beverage tax operates in a similar manner to the sales tax (Indiana Information Bulletin 29, 07/01/2019). If the meal is subject to state sales tax, the meal is also subject to the local food and beverage tax. The marketplace facilitator laws are generally applicable to state sales tax and might not address local restaurant related taxes. Restaurants and third-party food delivery companies, along with their professional advisors, should review local tax ordinances and address the remittance of local taxes in their contracts.

How does a restaurant or third-party delivery company determine which party is responsible for the collection and remittance of sales tax? Both parties should first review the tax laws of the jurisdiction. If the laws are unclear, a contract should properly address who will be responsible for remitting the sales tax collected. The restaurant should also review their weekly or monthly reconciliation reports from the service provider. This reconciliation report should reflect the amount collected by the service provider and the amount deposited to the restaurant. If the restaurant's deposit includes a sales tax entry, the restaurant should confirm the party responsible for remitting this to the taxing jurisdiction.

The responsibility will depend on the service—the provider, the state law, and the relevant contract. If both parties fail to remit sales tax, the taxing jurisdiction could hold both parties responsible. The liability may rest on which party is audited first. Indeed, states continue to look for revenue and sales/use tax audits are on the rise. The state

may simply look at who collected the payment, including the sales tax, holding the tax collector responsible for the tax remittance. Moreover, restaurants should want to pay the correct sales tax, and understanding all various applicable tax laws will ensure proper compliance and avoid double taxation. As the hospitality industry climbs out of the COVID-19 hole, restaurants should ensure they are in compliance in order to avoid huge state sales/use tax assessments.

CPAs must be aware of these complex issues and the impact these could have on their clients and employers. Given the multiple jurisdictions that may impose a sales tax, CPAs must stay abreast of these third-party delivery service rules and their associated sales tax implications in order to properly serve the restaurant industry.

Meal-Delivery Platforms: Multistate Sales Tax Practice Tips and Advisory Considerations

Determining the sales, use, excise, and other tax (collectively, transaction tax) obligations associated with the sale of a meal has always been a difficult endeavor. Historically, the transaction tax consequences of the sale of food and beverages have been fraught with uncertainties, resulting in different tax consequences applying to sales of seemingly similar items. One of the most notorious examples is the New York "sliced bagel tax," under which a whole bagel served without spread is exempt from state sales tax as a "grocery item," but a sliced bagel with cream cheese (or other spread) is subject to state sales tax as a "sandwich."[1] Numerous other examples abound, such as the nuances of whether an item is "prepared food" or a "food ingredient," or "food" versus a "nutritional supplement," or "prepared for immediate consumption" or otherwise–all of which can affect taxability in several states (with varying results).[2]

Given these nuances, correctly ascertaining the transaction taxes due on the sale of food and beverages is a highly complicated task for a dining establishment, even without the involvement of a third-party intermediary. When the transactions involve intermediary platforms that facilitate the purchase and delivery of meals to customers (referred to throughout this article as "meal-delivery platforms"), and that may be operated outside of the state and have no direct control over the preparation and delivery of the food at issue, the ability to correctly determine the amount of transaction tax due becomes even more complex. In addition to the underlying taxability of the food and beverage items being sold, meal-delivery platforms must consider, among other

things, whether a given state's marketplace facilitator platform law applies, whether any fees imposed by the platform are taxable, and whether special transaction taxes (including local taxes) apply. These and other issues are explored in this article, the third in a series from Checkpoint Catalyst on intermediary platforms, which draws from the author's experience in practice to highlight transaction tax considerations for meal-delivery platforms. The previous articles in this series offered tips and considerations for lodging intermediary platforms, rental car facilitators, and passenger transportation platforms.[3] As highlighted in the previous articles in this series, there is a marked lack of uniformity in the obligations that states impose on intermediary platforms, and meal-delivery platforms are no exception.

Obligations Under State Marketplace Facilitator Laws

Some states have asserted that meal-delivery platforms were required to collect and remit transaction tax even before the Supreme Court's 2018 *Wayfair* decision eliminated the physical presence nexus requirement–for example, the South Dakota Department of Revenue has taken the position that a meal-delivery platform establishes nexus through the physical presence of delivery personnel in the state[4]—but the obligations of remote platforms to potentially collect and remit transaction taxes expanded exponentially following *Wayfair* and the subsequent proliferation of state marketplace facilitator laws. As discussed in the earlier articles in this series, marketplace facilitator laws generally shift the transaction tax remittance obligation from the marketplace seller of the taxable good or service (*e.g.* , the restaurant preparing and selling the meal) to the platform that facilitates the sale of that good or service (*e.g.* , the meal-delivery platform).[5] Thus, at the outset, meal-delivery platforms should ascertain whether they are potentially subject to a state's marketplace facilitator law–a determination that may vary depending on the meal-delivery platform's business model and the nuances of the marketplace facilitator law at hand.

Some states have directly addressed the applicability of their marketplace facilitator laws to meal-delivery platforms, with varying results. For example, effective April 1, 2020, Georgia law treats meal-ordering and other platforms as marketplace facilitators and requires them to collect and remit tax if the gross receipts from transactions they facilitate on behalf of third-party restaurants or meal providers equal or exceed $100,000 in the previous or current calendar year.[6] California, on the other hand, excludes "delivery network companies" from the marketplace facilitator provisions requiring collection and remittance of sales tax.[7] The California law defines delivery network companies to mean businesses that maintain an internet website or mobile application used to facilitate delivery services for the sale of local products, and thus would encompass meal-delivery platforms that facilitate the sale and delivery of meals from local restaurants.[8] In other states, such as Tennessee, a meal-delivery platform can elect to be treated as a marketplace facilitator.[9]

Furthermore, even in states that may not have addressed meal-delivery platforms outright, the statutory language that defines a marketplace facilitator often bears particular relevance for meal-delivery platforms. Namely, some states' facilitator laws require that a platform enter into a contractual arrangement with a marketplace seller in order for that platform to be considered a marketplace facilitator. For example, in Virginia, a marketplace facilitator is defined as "a person that contracts with a marketplace seller to facilitate, for consideration and regardless of whether such consideration is deducted as fees from transactions, the sale of such marketplace seller's products through a physical or electronic marketplace operated by such person."[10] However, in the author's experience, some meal-delivery platforms do not necessarily contract with every meal provider listed on the platforms. Rather, certain restaurants and other meal providers may be permitted to list their items on the platform without ever entering into a contractual arrangement with the platform itself. In those arrangements, the platform may not be considered a marketplace facilitator in states that require contractual privity between the marketplace facilitator and the marketplace seller.

Other states do not require that any contractual arrangement exists between the platform and the marketplace seller for the law to be triggered. For example, in South Carolina, a marketplace facilitator is defined as "any person engaged in the business of facilitating a retail sale of tangible personal property by: (a) listing or advertising, or allowing the listing or advertising of, the products of another person in any marketplace where sales at retail occur; and (b) collecting or processing payments from the purchaser, either directly or indirectly through an agreement or arrangement with a third party."[11] Given the nuances in state laws, any determination on the issue of whether contractual privity between platform and seller is required to trigger obligations under a state's marketplace facilitator law requires a careful parsing of the state's statutory language, and may require further communications with the state's revenue department where the language is unclear.

Taxability of Meal-Delivery Platform Fees

Another issue that frequently arises for meal-delivery platforms is the taxability of the fee(s) charged by the platform. While fee structures vary among meal-delivery platforms, common fees charged or retained by these platforms include service fees, processing fees, and delivery fees. Depending on the platform and the fee at issue, the fee may be charged to the restaurant as a condition of being listed on the platform, or to the person ordering the meal.

Most states have not yet expressly taken a position on whether fees charged by a meal-delivery platform are taxable, but there are some notable exceptions. For example, Texas issued a private letter ruling in September 2021 finding that numerous fees

charged by a meal-delivery platform, including service fees, credit card processing fees, and other special fees, were all subject to sales tax as data processing services.[12] To the contrary, Tennessee issued a letter ruling in April 2022 advising that service fees and other fees charged by a meal-delivery platform were not taxable under the state's marketplace facilitator law, because the "true object" of these fees was the provision of a non-taxable service. [13]

Other states take the position that, broadly speaking, amounts retained by a marketplace facilitator in connection with the sale of the taxable item via the facilitator's platform are subject to sales tax as part of the measure of gross receipts.[14] In other states, the taxability of the fee may depend on its characterization. For example, in several states, "delivery fees" associated with the sale of food are taxable.[15] However, more amorphous "service fees" may not be taxable, particularly if the service charge is separately stated and the state does not generally tax services.[16] In still other states, amounts retained by a marketplace facilitator that are contingent on a sale being made (*e.g.* , fees or commissions paid by a marketplace seller to a marketplace facilitator after a sale is made) are excluded from sales tax. [17]

Overall, the taxability of fees charged or retained by meal-delivery platforms varies widely from state to state (and at times, from fee to fee), and therefore meal-delivery platforms should conduct a careful state-by-state review to ensure that they are not undercollecting or overcollecting sales tax on fees.

Applicability of Special Transaction Taxes

Finally, a meal-delivery platform should consider whether it is potentially subject to transaction taxes other than the state's general sales tax. Some states (*e.g.* , New Hampshire and Vermont) impose a special meals tax in addition to or in lieu of the sales tax.[18] New Hampshire, for example, does not impose a general sales tax but does impose a meals and rooms tax. Under this law, a meal-delivery platform is considered an "operator" that is required to collect and remit the state meals and rooms tax if: (1) the consumer purchases a taxable meal directly from the meal-delivery platform; and (2) the price paid by the consumer to the meal-delivery platform for the meal includes the purchase and delivery of the meal to the consumer.[19] Vermont similarly requires meal-delivery platforms to register as operators and remit the state meals and rooms tax, and requires meal-delivery platforms to collect and remit tax on facilitation fees, delivery fees, and other fees retained by the platform.[20] In Vermont, the meals and rooms tax applies in addition to the sales tax.

Even more troubling, some states impose special meals taxes at the local level. For example, certain localities in North Carolina impose a local meals tax.[21] Beginning July 1, 2020, meal-delivery platforms that are required to remit state and local sales and use taxes are also required to remit the local meals tax on prepared food and beverages,

and these taxes must be remitted to the taxing county rather than the state.[22] As discussed in the first article in this series,[23] the question of whether locally-imposed taxes can be collected from marketplace facilitators lacking a physical presence in the state raises constitutional concerns. Namely, many of the constitutional "safeguards" referenced by the *Wayfair* Court (*e.g.* , economic nexus thresholds, centralized filing mechanisms, and uniformity standards) don't necessarily exist in the locally-administered tax consequences, and the practical burden that remote marketplaces may encounter in attempting to comply with thousands of different local taxing statutes raises "undue burden" concerns that were first envisioned by the Supreme Court in *Pike v. Bruce Church, Inc.* [24] and later referenced in *Wayfair*.

The Takeaway

With the proliferation of state marketplace facilitator laws, states have begun focusing increased attention on the transaction tax obligations of specialized intermediaries, including meal-delivery platforms. However, as with other types of specialized intermediaries, such as lodging and passenger transportation platforms, the states have taken different approaches to what these platforms' obligations should be. For meal-delivery platforms in particular, there is little uniformity among the states regarding whether these platforms are generally required to collect and remit transaction taxes and the extent to which the platforms' fees are also subject to tax. Imposition and collection of local taxes also varies widely among the states, in some cases generating constitutional issues yet to be resolved. To avoid surprises on audit, it is crucial for meal-delivery platforms and their advisors to carefully examine each state's tax laws and evaluate the application of those laws to the meal-delivery transactions facilitated by the platform.

15 Essential Features of a Food Delivery App for Ordering

In 2023, we'll be seeing dramatic growth in the order delivery segment of the market according to research . Another source expects the revenue to reach $0.91 trillion by December. The growing popularity of food delivery companies like Uber Eats and EatStreet has been followed by the appearance of many smaller food delivery apps.

To stand out in this highly competitive market, you need to develop a state-of-the-art app for food delivery that creates a remarkable user experience. How to do it? Start with predicting user needs, implementing multiple food delivery app features, and choosing the right tech partner for the job. Binariks is a food delivery app development company with a proven track record of creating apps that succeed.

Predicting all clients' demands and planning the relevant functionalities may be difficult. That's why we present you with a list of food delivery app essential features.

How food delivery platforms work

Before you get acquainted with the food delivery features, you need to learn about the basic principles of on-demand food delivery services. Software for food delivery allows diners to order food from restaurants or stores to their location. Such systems also provide restaurant management dashboards and coordinate the couriers responsible for order delivery.

There are two most common models according to which food delivery platforms work:

The logistics model

It is a model applied by the world's most prominent food delivery companies, such as Uber Eats and DoorDash. In this case, you connect the diners with restaurants or stores and take responsibility for delivering meals. Such a model may be challenging to implement because you will need to build an entire logistics network . Meanwhile, it can bring you great benefits in the long run. For example, you can raise your profits with a 15%-30% delivery fee charged per each order placed with your food delivery service app.

The aggregator model

It is the most common model for food delivery apps. Such applications connect customers with restaurants and stores without taking any delivery responsibilities. One of the best examples of such food delivery software is Zomato. The main benefit of the aggregator model is that it is rather simple to operate. You do not have to hire people and build your own courier network coordinated with a delivery driver app. It makes such an approach much less costly than the logistics model. The main drawback of the aggregator model is that the selection of restaurants and stores is limited to those that provide their own delivery.

Mind that a food delivery system connects different user categories – restaurants, couriers, and diners. Therefore, such a platform usually integrates several interconnected food delivery apps, including:

1. **An order management app for restaurants/stores.** It organizes online ordering for restaurants and stores by allowing them to accept and manage orders.

2. **A courier delivery app.** Such an application coordinates the drivers delivering the meals.

3. **A food delivery app for diners.** This app allows clients to order food from restaurants or request on-demand grocery delivery to their location.

In this material, we will focus on the development of food delivery apps for diners, or rather the food delivery features that are needed for this. An ordering app for food delivery is oriented toward a broad user base. Therefore, to ensure the success of the entire food delivery system, you should build a great user experience with such an app for delivery. Read also our location-based mobile app development guide.

15 food delivery app features

Now, let's proceed to a more practical part. Here we present the most valuable features of the online food ordering system to include in a food ordering app. Features of a food delivery app can be divided into several categories:

User Profile and Ordering	Navigation	Feedback and communication	GPS and tracking	Integration
User profile	Dynamic lists	Ratings and reviews	Order tracking options	Integration with social media
Group orders	Interactive search	Live chat	Notifications system	Integration with third-party apps
Payment system	List of recommendations			
Reorder options	Voice instructions			
	Customizable menus			

1. User profile

A user profile is the basic user interface feature of any app for food delivery. You need to make it as convenient to use as possible. This means ensuring secure yet fast log-ins and log-outs. An opportunity to authorize with one's Google or Facebook account will save the user's time. You should also add other user profile sections that will make a profile more customizable and user-friendly. These may include user personal data, payment settings, order history, and a personalized list of recommendations.

2. Dynamic lists

Some restaurants or stores may close over time or just be too busy to receive orders. Hence, you should introduce dynamic lists of restaurants and grocery stores that will be continuously updated to show available options. This will improve user experience because they will see only relevant offers and, thus, save their time. Also, make sure that your list is easy to navigate and has many filters. This applies to all menus or lists in your food delivery service app for restaurants or delivery grocery apps.

3. Interactive search

You do not have to reinvent the wheel. You just need to include a traditional search box in your food delivery software. The user will type the name of the desired restaurant, store, or meal in this box and receive a list of suggestions. Mind that many clients may not know the precise names of dishes, restaurants, or stores. This means that your interactive search tool should provide relevant suggestions even when users make mistakes.

4. Order tracking options

Users of food delivery apps often lack patience. Add order tracking features to food delivery apps to relieve the least patient and the most hungry diners. It goes about immediate updates on the order status and the ability to track its location. While implementing location tracking features in your food delivery app, make sure to avoid common for map-driven software faults. For example, a map glitch can show the client a disappointing picture in which a courier does not move for more than five minutes. Each order canceled because of such issues is a big failure for your delivery tracking app. Fortunately, a fast and stable connection and proper integration of GPS systems into your software solve this problem and many more GPS-related issues.

5. Group orders

To make food ordering convenient for groups of diners, implement a group order feature. Numerous users will be able to order meals from their personal devices and then unite their orders into a single one. An automatic split bill function for group orders will also save users' time.

Building a group order feature and ensuring app connectivity may be challenging. It will also increase the food delivery app development cost significantly. However, this feature will significantly improve the user experience with your product.

6. List of recommendations

Among the features of the food ordering system, another important one is the list of recommendations. While launching a food delivery app, users often don't have specific

preferences. They may just scroll over your lists, unable to decide which meal to choose and where to order it. To help them out, integrate basic analytical tools with your food delivery software for lists of recommendations. Such recommendations may depend on both the history of individual orders and general trends in online ordering for restaurants. Anyway, they will relieve indecisive users from lengthy decision-making.

7. Ratings and reviews

It will not come as a surprise that the food and beverage industry clients like reading reviews. You can meet such users' demands by introducing a simple system of ratings and reviews in your app. Each user that requests a delivery from a specific restaurant or grocery store should get an opportunity to leave short text feedback and rate its services. It helps restaurants or groceries rank better in-app search results. In addition, dissatisfied with restaurant or store service users get an opportunity to express their discontent.

8. Convenient and secure payment options

Allow food delivery software users to add numerous payment methods in the application and switch between them instantly. Also, ensure connectivity with the introduced payment systems so there will be no transaction failures or delays. Finally, do not forget to secure all transactions and the client's payment data with tokenization, data encryption, and transaction verification tools. Even minor payment safety issues can be damaging to your reputation or even make you liable.

9. Live chat

Another food delivery app feature is a live chat. In most cases, additional requests can be settled via the telephone, as most delivery grocery apps or restaurant ordering platforms display the relevant phone numbers to users. However, some clients may want to keep their phones private or have mobile network issues. Hence, the best solution is to introduce a live chat feature. It will connect your ordering software with the app that manages online ordering for restaurants and the courier delivery app. As a result, a user will use the chat to contact restaurant staff, store employees, or delivery persons and explain one's concerns or preferences.

10. Notifications system

Make sure to create a notification system that will update the client about their orders, special offers, and delivery status. In-app push notifications are the industry standard. The client receives them in real time and will not miss such notifications among loads of received SMSes. In-app notifications can support your marketing practices by promoting special offers to users. Here are some tips on how to use in-app notifications wisely.

Do not underestimate the value of a well-planned approach to notifications. Specific faults, such as spam messaging and wrong notification timing, may irritate some users. This will, eventually, turn them away from your food delivery software.

11. Voice instructions and voice integration

Voice instructions are a way to make your app more inclusive by allowing visually impaired customers to navigate through the app and place orders. However, this feature is also useful for a wide pool of mainstream customers. To put it into context, voice assistants are expected to be used on 8.4 billion devices by 2024 (source), which exceeds the world's population. People use voice assistants for everything because it is effortless, fast, and comfortable, and this is just what features of a food delivery app should be. Voice instructions should allow scheduling the order, reordering, and placing a brand new order from start to finish.

12. Integration with social media

Social media integration allows customers to sign up and log in through their social media accounts and share photos, videos, and other information about their orders. Aside from allowing people to interact with your app in yet another way, this option is also an online marketing tool. It serves as an organic way to increase exposure without trying too much.

You can track what customers post to see which trends they usually respond to. Last but not least, integration with social media provides yet another dynamic communication channel to interact with customers.

13. Reorder options

While trying new foods is an exciting option that food delivery apps provide, many customers choose to go for their order staples time and time again, as they know what to expect from the meal.

For many of these customers, an option to reorder previously placed orders with a single click or through a saved list of favorite items is a must. This option also reminds people what they ordered last, which is a way to save time, something most customers want from a delivery app.

14. Integration with third-party apps

This feature gives customers additional perks beyond delivery, like the ability to book tables at the restaurant. Not many apps on the market go for this feature as it is more difficult to realize, but it allows expanded cooperations with your restaurant partners. If your goal is to work with restaurants beyond just delivery and have your customers turn

to you for more services and become an ultimate app for all things restaurant-related, this option is excellent.

15. Customizable menus and item descriptions

Outside of apps, restaurants often have dynamic menus with seasonal offerings, different brunches every day, or special offerings, but apps cannot often reflect that because it requires having a special feature to accommodate. Customizable menus and item descriptions option is one the unique features that allow restaurants to showcase their unique offerings and stand out from competitors.

Not only that, it is excellent for customers who want to make very particular choices about their food and those who often eat at the restaurant they order from outside of delivery, know the menu, and want their dine-in experience to be translated to take-out more seamlessly. Finally, this option is great for people with allergies and dietary restrictions.

Tech stack for food delivery app

Now that you know the essential features of food ordering system for restaurant to include during food delivery app design, let's proceed to some practical implications. Choosing the appropriate tech stack is essential for the development of a food delivery app. Here are some tech stack recommendations that will help you launch a successful application for on-demand food delivery services.

User onboarding

User profile authorization through Google or Facebook saves time for your app's users. Use Google and Facebook software development kits to ensure seamless connectivity with Google and Facebook.

Payments

Use the most credible and popular digital wallet platforms to ensure secure and fast payments. The best solution is to integrate Google Pay, Amazon Pay, or iOS Wallet as the most widely applied payment platforms with top-notch connectivity.

Restaurant/store listing and recommendations

Implement specific APIs, such as GrubHub or FourSquare, during food delivery app development. They create lists of location-specific recommendations that will make your product more customizable and user-centered.

Data storage

If you want to save money on idle capacity and ensure higher software scalability, use cloud platforms for food delivery app development. World's best cloud providers, such

as AWS, GCP, and Microsoft Azure, offer a broad tech stack required for building cloud, hybrid cloud, or [serverless software](#) .

Mind that the tech stack for food delivery application development depends on the platforms on which your app will run. Food ordering software may be web-based, but in most cases, those are mobile apps for iOS and Android or cross-platform systems. If you do not know which technologies to choose for the development of a food delivery app, ask reputable [mobile](#) or [web development](#) specialists to consult you.

The cost of food delivery app features

The cost of developing a food delivery app varies greatly depending on specific features and other factors, like developer rate, development tools and technologies, the progress of the development cycle, design of the user interface, and security features. Other factors that might come into play are acquiring intellectual property rights, marketing, and maintenance.

The total cost can be anywhere between $30,000 for a very basic app and $150,000 for a complex app like Deliveroo or Postmates, with many additional features.

The estimated cost of specific food delivery features

This is the list of estimated prices for different app features. The final price depends on the scope and complexity of the feature, developer rate and experience, and other factors.

- **User profile and basic user interface:** $2,500 to $5,000

- **Admin panel:** $8,000 to $15,000

- **Payment system:** $3,000 to $10,000

- **GPS order tracking and push notifications:** $2,500 to $6,000

- **Reviews and ratings:** $1,500 to $3,500

- **Dynamic lists:** $5,000 to $10,000

- **Interactive search:** $2,000 to $5,000

- **Live chat:** $3,000 to $8,000

- **Recommendation list:** $5,000 to $10,000

- **Reordering options:** $2,500 to $5,000

- **Group orders:** $7,000 to $10,000

- **Voice instructions and voice integration:** $10,000 to $20,000

- **Integration with social media/third-party apps:** $3,000 to $10,000

- **Customizable menus and item descriptions:** $5,000 to $10,000

Food delivery app development guide [features, process, cost, business models]

As consumers increasingly demand convenience and variety, food delivery app development offers new ways to access meals and groceries. Gone are the days of sifting through menus or making phone calls; today's users expect seamless experiences delivered right to their doors.

According to Statista, the revenue in the online food delivery market in the United States is projected to reach $353.30billion in 2024. In fact, recent studies show that a staggering 70% of consumers ordered delivery last month (data from early 2024), highlighting a significant shift in how we approach meals. This growing demand presents a unique opportunity for entrepreneurs and developers to meet consumer needs by building profitable food delivery products.

In this guide, you'll discover effective strategies for building a food delivery app that not only attracts and retains users but also ensures a robust revenue stream. You'll also learn about different types of food delivery apps, as well as the key aspects of food delivery app development, such as building costs, time to market, essential features, and valuable development tips. So, let's dive in and discover what it takes to create a standout food delivery app that captures the hearts (and stomachs) of consumers!

Why creating a food delivery app is a profitable idea

The food delivery app market is rapidly growing and diverse, providing ample opportunities for startups. Here are three compelling reasons why developing a food delivery app can be a profitable venture:

1. Increasing demand for convenience. According to a report by Grand View Research, the global online food delivery market was valued at $221.65 billion in 2022 and is projected to expand at a CAGR of 10.3% from 2023 to 2030. This growth indicates a strong and rising appetite for food delivery services, driven by the desire for convenience and accessibility. In the U.S., 86% of individuals have used food delivery apps, and 53% consider delivery and takeout essential to their lifestyles.

2. Diverse user base. Food delivery services appeal to a wide range of demographics. Notably, 60% of U.S. consumers use online food delivery services at least once a week, with the figure rising to 64% among millennials. This diverse user base presents a significant opportunity for new and innovative food delivery solutions that cater to varying preferences and dietary needs.

3. Global expansion opportunities. ResearchGate indicates that even with big players in the US, China, and the UK, the global food delivery industry is still open to new companies. Regions such as Asia Pacific, which accounts for over 40.78% of revenue, are experiencing rapid urbanization and changing lifestyles that drive demand for food delivery apps. Additionally, emerging markets in the Middle East, Africa, and Latin America are beginning to adopt food delivery services, further expanding the global landscape.

With preferences shifting towards convenience and a growing appetite for diverse food options, there has never been a better time to build a food delivery app. This expanding market is ripe for fresh ideas and innovative products, making it essential to understand the various business models available to create a successful food delivery app. In the next section, let's explore how to develop a food delivery app by examining the different business models you can adopt!

Food delivery app development: business models

There are several types of online food delivery apps depending on the business model.

1. Restaurant delivery app

If you have a restaurant, a supermarket, or a grocery store, you can launch a mobile app so that your customers can order goods delivered directly from you. This model lets you get rid of the third parties and commissions, but requires more initial investments for delivery application development and support, and hiring drivers. To get started, many restaurant and store owners create a business plan with AI, helping them efficiently outline logistics, estimate costs, and plan customer acquisition.

Creating a mobile app is a more suitable option for large restaurant and store chains. For example, Domino's generates over 70% of sales via digital ordering channels including their mobile apps.

2. White-label food delivery software

This business model means that you don't need to have your restaurant, but rather to become a software provider that specializes in developing food delivery apps, supplying third parties with a white-label or out-of-the-box solution. It means an app builder that is customized for food delivery and restaurant businesses.

3. Food delivery aggregator

Think of Glovo or Uber Eats — these are food delivery aggregators. So, if you are looking to build an app that provides on-demand food delivery services from different restaurants, it is your option. What is beneficial about this model, is that you are able to extend it to other goods delivery like groceries delivery from supermarkets or C2C delivery. For example, Uber is partnering with a food service equipment distributor.

Let's discuss your food delivery app idea!Schedule a free consultation today!

Contact us

How to make a food delivery app: must-have features

Further, we have listed some basic features for food delivery app development including functionality of a user mobile app, courier app, restaurant and admin applications. There are also some features that may not be must-have ones, but could dramatically improve user experience.

At SolveIt, we provide free consultations so that you can get a feature list for the first MVP with a detailed cost breakdown to develop your own food delivery app. Contact us to schedule a free consultation.

User mobile app

1. **Sign-up and login.** Actually, signing up can be optional for customers to use a food delivery application. But if you need this feature, for the first MVP it can be implemented as a standard sign-up / login by entering an email or a phone number. Further, it may be extended to a Social Media sign-up option for faster onboarding. This could provide users with various registration pathways among which the incorporation of an email verifier, which adds an extra layer of security and ensures the validity of user information through email verification tactics .

2. **Profile management**. Users should be able to manage their profiles so that they can save their delivery information for future orders.

3. **For food aggregators: Catalog of restaurants**. The customer app should allow users to easily browse through a list of available food items and make their selections. To enhance the navigation, you can add a search bar, categories, and filters. For example, restaurants can be filtered by cuisine (fast food, Mediterranean, Asian, vegan, etc.), average check, distance or delivery time, rating, and so on.

4. **Menu**. On the restaurant menu screen, the meals are better to be divided into categories: breakfast, side dishes, main course, soups, desserts, beverages, etc. Don't forget that images are extremely important here. Other information to be shown on the menu includes price, ingredients, grams, and calories. As an extra feature here, you can allow users to customize their orders by adding or removing ingredients.

5. **Check-out**. The checkout screen should provide all the information about the current order: the restaurant, dishes, their quantity and price, and overall order price. Furthermore, it should include the following information and features to set up a delivery: estimated delivery time or an option to customize delivery time, delivery address field, and customer contact information. If discounts may apply, make sure you include this functionality in the checkout screen as well.

6. **Payment**. Payment can be made directly through the delivery app via Apple & Google Pay, PayPal, debit, and credit cards, or there may be an option to pay with cash if that's within your strategy. For the MVP you should add one or two payment options that are the most relevant to the region where your delivery app will be used.

7. **Order tracking**. Customers should have the ability to track their current orders in real-time, so they know exactly when they will arrive and have a piece of mind. You can make it a delivery status update or let users track their orders on a map. As well, you may want to allow users to view their past orders here, access payment information, and contact the courier.

8. **Push notifications**. With push notifications, you can inform users about their order's status or send special offers, make meal recommendations, and more. Mobile app notifications are a powerful marketing tool that can boost user engagement if it is done correctly and personalized.

9. **Support**. Customer support is important to handle user inquiries and problems. This can be done through different channels like phone, email, messengers, or via in-app chat.

Courier mobile app

1. **Registration and profile management**. Unlike customers, couriers have to complete registration with all the necessary information for safety operations. A standard set of data includes personal and contact information, personal ID, and driver's license. It may also be a good idea to have an identity verification (integration with a camera is required) and terms and conditions for couriers.

2. **Order management**. One of the most important features of a courier app. It has to be highly intuitive to keep the courier's attention on the most important things related to the order: delivery time, pick-up or drop-off locations, and the ability to get in touch with a restaurant and a customer. Of course, it should also provide all the order information including customer contact details, order number, details, and payment details. Couriers should also be able to view other orders in one place sorted by statuses like completed, rejected, delayed, and so on.

3. **Map and navigation**. Routing functionality is critical for couriers and it should be the precisest possible as it is the source of information regarding the estimated time of arrival. It can also be used to monitor couriers' activity and motivate them. For example, if couriers complete orders faster than was estimated. This functionality can be realized as an integration of 3rd party software like Google Maps, Mapbox, and others.

4. **Scheduling (for aggregators)**. Couriers can schedule their working hours in advance. To save time and money, you can integrate a calendar API like Google Calendar into your food delivery app.

Restaurant app

1. **Menu management**. With this functionality, restaurants can keep their menus up-to-date. Thus, restaurant managers should be able to add, delete, and edit all the fields of the menu items. It is a great option to give restaurants the ability to announce special offers and discounts.

2. **Order management**. Allow restaurants to view and manage incoming orders, including marking them as confirmed or canceled, in progress, ready for pickup, and completed. From here, restaurant workers should also have access to all order details: items and their quantity, customer's comments, customer's and courier's contact details, delivery time, payment information, and so on.

3. **Reporting & analytics**. Provide restaurants with detailed reports and analytics on their revenue, sales, deliveries, customers, etc., to help them better understand and improve their business operations. You can also provide data for

each item separately, including average cooking time, delivery time, and customer feedback. To facilitate this, you can use pdf forms to collect and present this data in a structured and easily accessible manner.

Admin functionality

If you're planning to build a food delivery aggregator app, the administrator's functionality may end up in a separate web or mobile interface. However, if you're looking to create a food delivery app for your restaurant/chain of restaurants, features of a restaurant app and admin functionality are reasonable to be developed in a single app.

1. **Restaurant management for food delivery aggregators**. If you are developing a Glovo-like food delivery app, then you should include a dashboard to manage partner restaurants. From this screen, admins should be able to add/delete partners, review and approve changes, contact restaurant managers, and have access to legal information and payments.

2. **Courier Management**. This functionality of this part should include access to the courier's contact and personal information, working conditions and schedule, productivity tracking, rating, and salary payouts. It can also have an in-built messenger to contact couriers. Here, you might also need tools to manage couriers' schedules and delivery areas to optimize delivery.

3. **Analytics**. Data and analytics are critical for any business to track its operations and state, as well as spot and timely solve problems. That's why effective data collection and visualization will be highly useful. The most important parameters to track include income and expenses (total and by categories), number of orders, and revenue brought from each partner. Furthermore, advanced AI tools can be implemented as well for risk management or data-driven tips on business optimization.

How to build a food delivery app: step by step process

We got really close to the main question: how to create a food delivery app that brings profit? Successful food delivery mobile app development can be a complex and time-consuming process. Further, we will walk you through the entire food delivery app development process, from idea to launch.

1. Discovery phase

The first step of a project discovery phase is to understand the client's business and the market landscape. At this stage, we schedule a discovery meeting with a client to learn more about their idea and requirements. Further, we perform a market analysis to

understand the existing competition, identify unmet needs in the market, and get the sense of the target audience.

Once this landscape is understood, it's time to start developing a food delivery app that can meet those needs. This involves creating a product roadmap and [wireframes](#) that detail how the app will function. These wireframes are then used to develop a prototype of the app.

After the prototype is complete, it's time to validate the concept with potential users. This can be done through user testing or focus groups. Once feedback has been collected and incorporated, it's time to move on to food delivery app development.

At SolveIt, we believe that a properly performed discovery phase can develop the most profitable MVP feature list. It means that based on the performed discovery and analysis, you can identify what features are of the top priority to meet your user needs, and not to overspend the development budget. Learn more how to make it right in [this article](#).

2. MVP development

[MVP development for startups](#) is the best approach to launch a new product. MVP helps to minimize business risks and enter the market in the most effective way.

Design

This is the first and most important step in developing a successful food delivery app. You need to make sure that your [app idea](#) is clear, concise, and easy to understand. The design should also be visually appealing and user-friendly. For expert assistance in creating an outstanding user experience, consider our [UI/UX design services](#). We specialize in conducting thorough user research, crafting intuitive wireframes, and designing engaging interfaces that facilitate a smooth onboarding process and enhance user retention.

Development

Once the design is complete, it's time to start coding the app. This is a crucial phase in creating a food delivery app, as it involves translating the design into a functional product. This can be done either by yourself or with the help of a specialized development agency like SolveIt. A [dedicated development team](#) of professionals can bring you a piece of mind here, because such agencies usually handle everything from idea to launch and support. Plus, you get the expertise and high-quality services while you can keep the focus on business and promotion.

Testing

Before launching your food delivery app, it's essential to test it on as many devices as possible. This will help you identify any bugs or glitches so they can be fixed before going live.

3. Launch

Once everything is ready, it's time to hit the "publish" button! To make it happen frictionlessly, you should make sure the food delivery app meets store requirements. Just in case: SolveIt takes care of store publishing as well, so our customers do not worry about this step either.

Make sure you promote your food delivery app well so people know it exists and can download it from their preferred app store.

4. Monitoring performance & gathering feedback

After you launch your app, you should monitor its performance and gather feedback from users. This will help you identify any areas where your food app needs improvement and make the necessary changes.

One way to monitor performance is to track key metrics such as the number of downloads, number of active users, retention rate, and engagement. You can use embedded analytics tools like Google Analytics or Flurry to track these metrics.

It's also important to get feedback from users through reviews and ratings on app stores, as well as through in-app feedback forms or surveys. This will give you insights into what users like and don't like about your food delivery app and what they would like to see changed or added.

5. Support, updates, enhancements

After taking feedback from users to determine, developers working on food delivery mobile app development typically release updates and enhancements on a regular basis. Updates may include new features, bug fixes, new content, or improved design.

For a successful product that users love and stick to, the ability to perform flawlessly is one of the most important criteria. That is why we advise to regularly check and improve mobile app performance.

6. Marketing and after-launch growth tips

Well done! Now the app development process is successfully completed. But it's not the end because you need marketing tactics and growth tips to gain your market advantage from the start and be successful in the long run.

By exploring our step-by-step guide, you understand that creating a unique food delivery app requires a distinct approach.

Don't forget to identify key partnerships and strategize fundamental activities, resource allocation, and value proposition. Then collaborate with your product development team to determine the essential components of your food delivery app promotion strategy.

Product development team for a startup: structures, roles and beyond

[Read article](#)

Key points you should focus on while developing a food delivery app promotion strategy:

- **User engagement.** Keep users engaged with personalized recommendations and loyalty programs.

- **Localized marketing.** Tailor marketing to specific regions for better outreach.

- **Multi-channel promotion.** Use effective channels like social media and influencers for marketing and PR.

- **Restaurant partnerships.** Forge partnerships with restaurants by offering incentives, ensuring a diverse selection on your food delivery app.

- **Data-driven insights.** Utilize data to refine strategies based on user behavior.

- **Revenue growth.** How likely is it that the new delivery app will supplement or replace current customer revenue (whether indoor or outdoor seating).

These points will drive your app's marketing and growth strategy, securing your position in the market.

How much does it cost to build a food delivery app

The cost of developing a food delivery app can range significantly, typically falling between $20,000 and $100,000 or more, depending on the features you want to include and the platforms you wish to support (iOS, Android, Web).

- Simple MVP (Minimum Viable Product): Starting around **$20,000** for a basic MVP app with essential features.

- Medium Complexity: Ranges from **$40,000 to $80,000** for apps with a more extensive feature set and improved functionality.

- Full Solution: Typically starts at **$80,000 and can exceed $100,000** for a comprehensive app with advanced features and multiple integrations.

Several factors influence these costs, including the app's complexity, the chosen tech stack, and the development approach, which we will explore below.

Factors influencing food delivery app development cost and time-to-market

Complexity. Cost-to-build and time to get your product to the market will strongly depend on the complexity of the app: number of features and integrations. A simple food delivery app can be developed in around 8 weeks (2 months), whereas a more complex app takes from 12 weeks (3 months) and longer.

Tech stack. The tech stack also plays a role in determining the cost and time to develop a food delivery mobile app. If you already have a team of developers experienced in building mobile apps, then they will likely be able to use their existing skillsets and knowledge to build your food delivery app relatively quickly. However, if you need to hire new developers or outsource the work, then this will obviously add to both the cost and development time.

The technologies, frameworks, and tools are available for delivery app development, so there is no need to reinvent your tech stack from scratch.

Development approach. The cost of on-demand food delivery app development also varies depending on which software development architecture you choose as well as the size and complexity of your project. If you choose to use an agile or [DevOps approach](), expect to pay more upfront, as these approaches require more planning and coordination than waterfall or traditional project management techniques.

We recommend starting with the MVP development services to validate the product on the real market, set up monetization and gradually add features based on the user needs and feedback.

How much does it cost to make an app?

[Read article]()

How to create a food delivery app [SolveIt experience]

In this section, let's look at our comprehensive approach to enhancing a food delivery app, highlighting the steps we took and the results we achieved.

Client & Challenge

The client had a food and grocery delivery app that included basic features such as a search bar with filters, restaurants and menus, cart management, checkout, payment options, and delivery tracking. However, the app's user interface was inconvenient and difficult to navigate, leading to lost customers and revenue. They sought our expertise to redesign the app to improve user experience and increase engagement.

Solution

SolveIt conducted a comprehensive discovery phase to understand user needs and analyze competitors, guiding the development of a new interface design.

Discovery Phase

- **Introduction and Analysis.** We gathered insights into client needs and user expectations through stakeholder discussions and user feedback. This allowed us to clearly define the requirements for the mobile app design and outline the key functionalities.

- **Technical Specifications.** We created a detailed backlog, developed user stories, and outlined use cases to define how users would interact with the app.

- **Design.** We developed a UI kit that encompassed color schemes, typography, and interface elements, including buttons and icons. Wireframes were created to visually represent the app's structure and user interactions. A clickable prototype was developed to test user engagement and gather initial feedback.

Results

The discovery phase led to:

- A clear understanding of users' expectations that were previously overlooked and detailed user stories for various scenarios.

- Creation of a UI Kit and clickable prototype to facilitate design validation.

- Enhanced user experience with a faster search process, easier order management, and streamlined checkout.

- Application architecture and integrations were described to ensure seamless functionality.

Bottom line

At SolveIt, we have the expertise in top-notch food delivery app development that meets your specific needs and requirements. Whether you want a simple app with basic features or an advanced delivery app with all the bells and whistles, we can create it for you.

Need an estimate for your food delivery app idea?

Get in touch!

Food delivery app development: FAQ

How to create a food delivery app?

To create a profitable food delivery app you can follow the next steps:

- Ensure your food delivery app idea is viable.

- Choose a suitable development approach.

- Define your food app delivery business model.

- Select necessary app features.

- Create an MVP version, test, and launch.

- Track performance, gather feedback, and make improvements.

How much does it cost to develop a food delivery app?

The cost to develop a food delivery app generally ranges from $20,000 to over $80,000, depending on complexity and features. A simple MVP starts around $20,000, while more complex apps typically range from $40,000 to $80,000. Comprehensive solutions with advanced features often begin at $80,000. Various factors, including the tech stack and development approach, influence these costs.

How do food delivery apps make money?

Food delivery apps generate revenue through various sources:

- **Commission per order:** they earn a percentage-based commission from restaurants for each order placed through the app.

- **Delivery charges:** apps may impose delivery fees, especially for orders below a minimum value.

- **Paid listings:** restaurants can pay for featured listings to gain prominence on the app.

- **Premium charges:** offering expedited or preferred delivery during busy hours for a premium fee.

- **Sponsored ads:** businesses pay for advertising within the app to reach a wider audience.

- **In-app payments:** processing payments directly in the app saves time and may also involve transaction fees.

How can I make my food delivery app successful?

To ensure the success of your food delivery app development, consider the following key strategies:

- **Localized focus.** Begin with a targeted geographic area for efficient service and fast deliveries.

- **Short delivery time.** Prioritize timely deliveries to promptly address customer cravings.

- **SEO and social media.** Create a user-friendly app optimized for search engines and shareable on social media.

- **Discounts and offers.** Attract customers with regular discounts and special promotions.

- **Innovative menu.** Stand out by offering unique and inventive food choices.

- **Engaging app experience.** Build an interactive app that simplifies ordering and delivery.

- **Diverse delivery options.** Provide convenient choices like varied delivery and easy pickup.

Food-delivery behavior under crowd sourcing mobility services

Abstract

The rapid development of the online food-delivery industry, has led to not only increases in the number of the crowd-sourced shared food-delivery service drivers on our roads, but also growing urban traffic safety management concerns. This study investigates the decision-making behaviors that exist between delivery drivers, their food-delivery platform and their potential impact on traffic safety. Using the evolutionary game theory, stakeholder decision-making behaviors involving traffic safety within the food-delivery industry were analyzed. From our analysis, several behavioral influencers were identified, including penalties for traffic violations, the opportunity cost of delivery drivers complying with traffic rules, the costs associated with risk and strict management approaches, reputation incentives, costs related to the delivery platform being punished, the probability of compliance with traffic rules, and the probability of adopting a strict management approach by the delivery platform. Our study demonstrates that stabilization strategies used by the food service industry differ when the types of government control measures also differ. When the government takes a more

aggressive approach to regulation and control, compliance with the traffic rules and the adoption of strict enforcement measures by management are the only evolutionary stability strategies available to food-delivery platforms. As part of a strict management strategy, appropriate compensation or incentive measures should be provided by the distribution platform. Furthermore, the fines given for traffic violations should be increased to create a safer road environment that has fewer traffic accidents involving food-delivery drivers.

1. Introduction

As the "internet + services" and "intelligence + logistics" models continue to rapidly develop in responses to today's increasingly fast-paced world, online delivery platforms have emerged as the most popular means of ordering food among China's urban population. By the end of 2019, China's food-delivery platforms were used by some 460 million customers (53.9% of the total urban residents in China), and employed nearly 10 million people across the country (Ii Media Research, 2019). As reported by Meituan Foresight Industry Research Institute, the number of online food orders has increased from 2.74 billion in 2015 to 18.28 billion orders in 2019, with an average annual compound growth rate of 60.71% (MFIRI, 2020). While an increasing number of consumers have sought to place online food-delivery orders, it is crucial that enough drivers are available to carry out the required deliveries (Howe, 2006; Sampaio et al., 2017, 2019). Crowd-sourced delivery, or alternatively crowd-shipping, constitutes a major class of crowd-logistics (Hong et al., 2018; Liu et al., 2020; Rey et al., 2018; Yildiz, 2021). Shared crowd-sourced and mobility services present a potential means of relieving the supply and demand pressures facing the food-delivery marketplace (Paloheimo et al., 2016; Perboli and Rosano, 2019; Reuters, 2016). However, a growing problem has emerged in which the drivers (the term we will use throughout the paper to refer to a crowd-sourced shared food-delivery e-bike rider) of these food-delivery services ignore traffic rules by speeding, running red lights, and retrograding their vehicles in an effort to meet the demands of the industry's "just in time" management process (Wang et al., 2021a; Zhang et al., 2021). As a result, the number of traffic accidents caused by these drivers have also been increasing year on year, greatly impacting the safety of urban public transportation systems. Exacerbating the problem, are requirements by the food-delivery platform in cities like Beijing, that orders made within a 2 km proximity of the restaurant must be delivered in 30 min (CCTV, 2020). For drivers that fail to complete their delivery within this specified time limit are fined and/or see their number of orders reduced. In terms of delivery time limits and large order volumes, Meituan (2018) found that 45% of delivery staff receive more than 20 orders per day, and the concentration of orders around specific times have created a series of traffic safety risks that are difficult to manage. The food-delivery

ordering time of consumers is basically coincides with the peak traffic hours on urban roads. According to news investigations that have been conducted, a driver was found to have violated 6 different traffic regulations across a 50-minute period in Beijing (CCTV, 2020). Clearly, these growing trends of illegal driving behavior can have a negative impact on traffic flows and road safety, which can in turn, endanger the lives of other motorists and nearby pedestrians. In order to reduce the likelihood of illegal driving behavior, several policies have been implemented by various local government transportation administration departments (TADs). However, the effect of these policies has been limited, as they are not able to completely manage the safety risks associated with a driver's traffic violations. Therefore, it is of great practical significance to clarify the internal mechanisms associated with these increasingly frequent traffic violations and to explore the traffic safety control measures that have been implemented to address the driving behaviors of drivers.

In order to manage the traffic safety risks of food-delivery, it is imperative that the key stakeholders (drivers, delivery platforms, and TADs) within the food-delivery market work together to address all key concerns. However, differences in opinion on how policy should be developed and implemented exist across each of the stakeholders (Kafle et al., 2017; Kurisu and Bortoleto, 2011; Yau, 2010). The main concern of TADs are the social benefits enjoyed by the local communities they serve, such as a safe road environment. Food-delivery platforms tend to be more interested in developing a strong brand reputation and an economically viable and profitable business model. While achieving a good reliable income is at the center of the drivers concerns. Based on how the Chinese Government's overall policy environment has developed, the strategies of the food-delivery platform and the drivers directly influence each other. In particular, the food-delivery platform considers the behavioral influences of the drivers when making operational decisions that seek to maximize profits, while ensuring relevant service quality targets are met. While on the other hand, the drivers seek to implement their own strategic plans according to the policies implemented by the delivery platform. One key characteristic of the crowd-sourced food-delivery environment is the self-scheduling delivery capacity (Rai et al., 2017; Wang et al., 2020b; Yildiz and Savelsbergh, 2019), i.e., drivers independently adjusting the order and route of delivery according to the actual situations they face. Therefore, the decision-making processes are highly dynamic and can greatly influence the road safety environment of the food-delivery industry.

Evolutionary game theory is a common tool for modeling decision-making research (Cardell et al., 1997; Wang et al., 2020a). In addition, when compared with traditional classic game theory, evolutionary game theory considers the bounded rationality of decision makers, making the results of this contemporary game more realistic (Leyton-Brown and Shoham, 2008). Meanwhile, evolutionary game theory pays

attention to the dynamics of strategy changes (Smith and Price, 1973), which helps to analyze decision-making behavior in multiplayer situations. From a transport management perspective, such an approach can provide important mathematical solutions to areas of both conflict and potential cooperation in the food-delivery industry. Therefore, evolutionary game theory can be used to explain the decision-making behavior of stakeholders involved in the development and implementation of traffic safety risk management strategies in the food-delivery industry. Game theory is applied to explore how each player selects the most reasonable strategy in an intricate and interactive situation, thereby studying the interactions of both players from the perspective of strategy selection (Ji and Levinson, 2020; Shao et al., 2018). In evolutionary game theory, player populations with bounded rationality are taken as study objects, and various factors affecting the behavior of the players are incorporated into the model, with the strategy selection process of each player being analyzed (Leyton-Brown and Shoham, 2008). Evolutionary game theory is an effective method for studying long-term dynamic games. It overcomes the shortcomings of traditional game theory by analyzing bounded rational players and the dynamic process of games (Liu et al., 2015). Moreover, evolutionary game theory is suitable for studying the evolutionary process of the two parties' strategic choices. In fact, the TADs of food-delivery represent an asymmetric game with two bounded rational populations. In this instance, both parties of the game constantly change their strategies by observing and comparing their respective returns. This is a typical long-term dynamic game.

The remainder of the study is as follows. In Section 2, the relevant literature is reviewed. In Section 3, the research model is constructed, with the equilibrium point and stability of evolutionary games analyzed. In Section 4, we substitute specific numerical values and provide relevant analysis and discussion. Finally, in Section 5 the key results are documented, with a range a of important risk management initiatives also proposed, which seek to enhance the level of road safety across the food-delivery industry.

2. Literature review

In China, food-delivery is mainly realized through non-motorized vehicles (e-bikes or motorcycles). In recent times, researchers have increasingly sought to address road safety concerns for bicycles and e-bikes involved in the food-delivery industry (Lu et al., 2015; Kocatepe et al., 2019; Waard et al., 2011; Zhang et al., 2018). Eboli et al. (2017) divided the risk of traffic accidents into three grades (low, medium and high risk), and identified the accident risk level of drivers by combining subjective and objective parameters. Yu et al. (2019) used association rules to identify the factors affecting road collision patterns and found that fatal road traffic accidents can be effectively reduced by regulating risky driving behaviors. In an examination of non-motorized road users (i.e., e-bike riders), Yao and Wu (2012) showed that risk perception, and attitudes towards safety and responsibility are associated with risky riding behavior. Stelling-Konczak

et al. (2015) proposed that the characteristics of cyclists and the traffic environment in general are also important aspects of bicycle safety. The lower the risk perception, the more likely a traffic accident will be caused (Li et al., 2020). While listening to music and talking on the phone was found to impair cyclists' perceptions of relevant traffic sounds, such as the sound of a bicycle bell (Waard et al., 2011). Utilizing the theory of planned behavior (TPB), Satiennam et al. (2018) found that rider attitudes influence their intention to obey traffic signals, particularly when they feel that they have a lack of control over work performance. Research into driving behavior, by Wu et al. (2012), examined three signalized intersections in Beijing by analyzing the red-light behaviors of cyclists using real-time video. Their study showed that 56% of non-motorized vehicles violate traffic rules, with the most common traffic violation being people driving through red lights at intersections. Yang et al. (2016) showed that drivers riding electric bicycles violated red light traffic laws far more frequently than conventional cyclists. Electric bikes were also more likely to be involved in risk-taking behaviors, such as riding into vehicle lanes, violating traffic laws, and running red-lights at intersections (Du et al., 2013; Shao et al., 2018). Other studies used both a control and an experimental group to study the behavior and traffic accidents of Chinese e-bike riders (Qian et al., 2020). Moreover, Zhang et al. (2019) sought to predict cyclist behavior of Chinese employees by integrating the perceived physical environment and social cognitive factors. While Sheu (2013) developed onlooker traffic models that examine the key causes of traffic accidents. A severe lack of safety knowledge is strongly related to dangerous driving behaviors and a failure of Chinese e-bike riders to adhere to traffic rule (Wang et al., 2018). Moreover, the incidence of running a red light was more prevalent when the waiting time was longer (Wu et al., 2012). In addition, a courier driver's income is paid by the platform itself. There are two aspects to a delivery driver's salary structure that need to be considered. The first is the income obtained from completing the order on time (+), the other is the penalty/fine received for failing to complete the delivery on time (−), which includes the cost of traffic violations. In order to complete their deliveries in a timely manner, the personnel involved in the food-delivery service industry are more likely going to commit driving offences than the usual everyday e-bike rider. Moreover, driving a bike while on the phone, speeding, and needing to cross the road, all impact one's ability to deliver these food orders safely.

In summary, the food-delivery service has a significant impact on urban road traffic safety management. Although a large number of studies have examined traffic safety, most of them have analyzed the factors that influence traffic accidents. The ordering platform and delivery personnel are all key stakeholders of the online ordering market, and only a few of them are integrated into the model (Mourad et al., 2019; Yu et al., 2022). Although using compensation to manipulate capacity has been investigated in the expanding on-demand service platforms literature (Bimpikis et al., 2016; Cachon et al., 2017; Taylor, 2018), we are, to the best of our knowledge, the first to investigate

the traffic safety risk management initiatives involving the crowd-sourced food-delivery service industry. Furthermore, even less is known about the evolutionary game behavior of the key players within the food-delivery market. For drivers, delivery efficiency and traffic safety are very important. In-depth research on how to clarify the relationship and promote the "perceived balance" between these two factors requires further examination. Therefore, this study will investigate the decision-making behaviors that exist between the delivery drivers, their food-delivery platform and their potential impact on traffic safety. Based on the evolutionary game theory, stakeholder decision-making behaviors involving traffic safety within the food-delivery industry were analyzed to provider greater insight into the governance of urban road traffic safety.

Since the evolutionary game was first introduced to the fields of management and social economics, it has been a popular tool for assessing a wide range of practical problems (Leyton-Brown and Shoham, 2008; Ozkan-Canbolat et al., 2016). However, from a TAD's perspective, it is important that whatever electric bicycle travel control measures are implemented, it is imperative that the issues of delivery efficiency and traffic safety are at the heart of the decision-making process. In particular, the issues regarding the kind of game that will occur between the food-delivery platform and their drivers and the factors that affect the stability of the equilibrium result need to be addressed. In order to assess these issues, our study utilizes the evolutionary game theory to examine the takeout distribution market. In doing so, we analyze the evolutionary relationship between food-delivery platforms and drivers, under the assumption that the government places strict traffic controls on how e-bikes can be used and driven. Our study provides an important empirical reference for governmental transportation institutions that are seeking to formulate safer and more effective food-delivery mechanisms.

The potential academic contributions of this paper are as follows. (1) This research focuses on the traffic safety risk management issues that impact the crowd-sourced shared food-delivery mobility service industry using an "internet +" new business model which differs from the traditional traffic safety issues. (2) Our study explores the potential differences that exist in decision-making behaviors between the drivers and their food-delivery platform, from a crowd-sourced food-delivery perspective. As these two groups represent the main actors involved in the assessment of road safety issues within the food-delivery industry, our evolutionary game approach forms a new methodological approach and research perspective. (3) This study analyzes the impact that scientific and technological progress has on the differences in psychological perception and road user behavior. Such a focus, provides a basis for discussing the relationship between emerging technologies and traffic safety.

3. Research model

Evolutionary game theory is a complex dynamic game process, in which a certain number of game groups continuously adjust their behavioral strategies according to the information that they acquire and their own experiences, under bounded rational conditions. The core connotation of this theory is evolutionary stability strategy and replication dynamics (Leyton-Brown and Shoham, 2008). Given these principles of evolutionary game theory, the modelling process is provided as follows.

3.1. Establishment of game relationship

Through the implementation of stricter e-bike travel rules by the relevant governmental traffic management departments, the food-delivery platform and food-delivery drivers have proposed the following requirements. On the one hand, the food-delivery platform is required to strictly manage drivers in accordance with the relevant governmental and organizational regulations, which can increase the operational costs of the platform. On the other hand, for food-delivery drivers, platform management's introduction of strict new rules that seek to improve the delivery process and in doing so help to reduce the frequency of traffic violations, has increased the time cost of their delivery.

In this research, the main players within the evolutionary game, are the food-delivery platform and the drivers. Given such a context, we assume that the food-delivery platform has two strategies to choose from, namely a strict or passive management strategy. A strict management strategy is one in which the food-delivery platform seeks to ensure that their drivers strictly comply with all the pertinent traffic regulations created by the central and local government transportation bodies. Under such a regime, drivers that fail to adhere to these regulations and have repeated traffic violations will have their employment contracts terminated. A passive management strategy is one in which the food-delivery platform does not review the driving history of its food-delivery drivers. A failure to do so, means that the platform is unable to assess whether their drivers are operating in accordance with the TAD regulations, which means staff that frequently violate traffic laws can continue working for the platform. Alternatively, food-delivery drivers also have two strategies available to them, in which they can choose to comply or not comply with the traffic laws. A compliance strategy is one in which the food-delivery drivers follow the new e-bike traffic laws and regulations. A non-compliance strategy refers to the food-delivery drivers who do not follow the relevant road rules. In specific terms, the pure strategic options available to the delivery platform are either strict or passive management approaches, while the strategies of the delivery drivers is one of either compliance or non-compliance with the relevant traffic laws.

3.2. Model assumptions

In order to meet the basic conditions of evolutionary games and facilitate quantitative research, the modelling process is given as follows.

Assumption 1. The fundamental premise of evolutionary game theory, is a dynamic and repetitive game in which each party operates under conditions of limited rationality. Therefore, in a traffic safety context, it is assumed that two players representing both the food-delivery platform and the drivers are bounded rational economic men with learning abilities. As such, and in an effort to maximize profits, both players will constantly adjust their decision-making behaviors through imitation and by learning the best strategic choice to make.

Assumption 2. It is assumed that the probability of the drivers to choose the strategy of "compliance with traffic rules" and "non-compliance with traffic rules" is () and respectively, means that the drivers have chosen to adopt a strategy of "compliance with traffic rules", while means that the food-delivery staff have chosen to adopt a strategy of "non-compliance with traffic rules". Furthermore, the probability of the delivery platform to choose the strategy of "strict management" or "passive management" is () and respectively, means that the food-delivery platform has chosen to adopt a "strict management" strategy, while means the food-delivery platform has chosen to adopt a "passive management" strategy.

Assumption 3. Here the costs and benefits of food-delivery drivers are examined. In this instance, when the drivers choose to adopt a strategy of "non-compliance with traffic rules", they incur a penalty cost of . For example, the TADs impose penalties, fines and etc. Alternatively, when the drivers choose the "compliance with traffic rules" strategy, the cost paid is (to comply with the traffic rules, the cost of waiting for the red-light, the time cost associated with taking longer to deliver their order etc.). Since the TADs have implemented stricter regulatory requirements for e-bike driving, it is assumed that the cost of a food-delivery driver to comply with the traffic rules must be less than the cost of punishment for non-compliance with the traffic rules, that is . Otherwise, the delivery staff have no incentive to choose the "compliance with traffic rules" strategy. In addition, it is assumed that the tangible income obtained by the drivers under the two strategic choices is equal, shown here as , and .

Assumption 4. Here the costs and benefits of the delivery platform are examined. In this case, when the food-delivery platform chooses to embrace a "strict management" strategy, the time and material cost spent in its management process is . While at the same time, due to a strict management approach, the number of drivers is reduced, resulting in risks to the platform; here cost is . In a situation whereby management strictly follows the regulations implemented by the governmental traffic agency, the platform adopts strict management measures to give the platform a reputation incentive of . When the food-delivery platform adopts a passive management strategy, the punishment cost of the TADs is . For example, the government traffic division stops access to the food-delivery service because it has not been operating in a manner that adheres to their traffic regulations.

Assumption 5. When the delivery staff follow the traffic rules, they can actually help to reduce the frequency of consumers dining out, which in turn reduces the problem of urban traffic congestion, improves economic efficiencies, and then finally increases the welfare utility enjoyed by society as a whole. Assuming that the economic gains obtained by the delivery platform are , when the delivery person fails to drive in a manner which adheres to the traffic rules, their behavior can negatively impact traffic flow, which may even cause hidden dangers to the urban residents, resulting in a decline in the level of social welfare. The loss to the food-delivery platform due to the management of the drivers is .

Based on the above assumptions, the various parameters of traffic safety from a food-delivery perspective, are summarized in Table 1.

Table 1. Parameters and meaning.

Parameter	Description
C_{11}	Infringement costs for traffic violations by drivers
C_{12}	Opportunity cost of delivery staff complying with traffic rules
R_{11}	Tangible income obtained by the delivery staff under the two strategic choices
C_{21}	Cost to food-delivery platforms using a strictly supervisory approach
C_{22}	Cost of strict management by food-delivery platforms that leads to reductions in driver numbers
R_{21}	Reputation incentives for food-delivery platforms that are strictly regulated
C_{23}	Penalty costs of negative management decisions by food-delivery platforms
R_{22}	Governance benefits of the platform, when the food-delivery market is operating normally
C_{24}	Control losses by the platform, when the food-delivery market is not operating normally

3.3. Perceived benefits for each game player

Based on the above assumptions, the payment matrix of the game between the food-delivery platform and the drivers can be constructed using the corresponding strategic combination. The results are shown in Table 2.

- (1)

For the delivery drivers, the respective perceived benefits of drivers "compliance with traffic rules" and "non-compliance with traffic rules" strategies and the average perceived benefit to the drivers are shown in Eqs. (1), (2), (3).

(1)(2)(3)where E_1 is the respective perceived benefit of drivers complying with traffic rules, E_2 represents the respective perceived benefit of drivers violating traffic rules, $E_{average1}$ indicates the average perceived benefit to the drivers, x represents the probability of the drivers to choose the strategy of "compliance with traffic rules", y represents the probability of the delivery platform to choose the strategy of "strict management".

- (2)

For the delivery platform, the respective perceived benefits of the delivery platform's "strict management" and "passive management" strategies and the average perceived benefit to the delivery platform are shown in Eqs. (4), (5), (6).

(4)(5)(6)where E_3 is the respective perceived benefits of the delivery platform choosing the strategy of "strict management", E_4 is the respective perceived benefits of the delivery platform choosing the strategy of "passive management", and $E_{average2}$ is the average perceived benefit to the delivery platform.

Table 2. Payment matrix of the game between takeout delivery platform and drivers under strict management.

Food-delivery driver	Empty Cell	Food-delivery platform	
		Strict management	Passive management
Compliance with traffic rules		$R_{11}-C_{12}$; $R_{21}-C_{21}+R_{22}$	$R_{11}-C_{12}$; $R_{22}-C_{23}$
Non-compliance with traffic rules		$R_{11}-C_{11}$; $R_{21}-C_{21}-C_{22}-C_{24}$	R_{11}; $-C_{24}-C_{23}$

In addition, according to the payment matrix, (observing traffic rules, strict management) is our ideal strategy combination. As documented above, the probability of delivery personnel choosing the strategy of "obeying traffic rules" is X ($0 \le x \le 1$), and the

probability of a delivery platform choosing the strategy of "strict management" is Y ($0 \le y \le 1$). We set the probability that delivery personnel obey traffic rules and the delivery platform strictly manage as Z ($0 \le z \le 1$), $Z = XY$, and Z is the function equation of the ideal equilibrium strategy. The three-dimensional function curve of Z about X and Y is established, as shown in Fig. 1. Obviously, the maximum value of z is 1, and the corresponding value of (x, y) is (1, 1). In this case, the delivery personnel will abide by the traffic rules, with the delivery platform adopting a strict management approach. In order to further analyze the strategy selection of each decision-making body (Fig. 1), the numerical values shown in Table 3 are used. From this anlysis we can deduce that when the values of x and y are large, the value of z will be large. Corresponding measures can be taken to adjust the probability of x and y to achieve the ideal equilibrium strategy.
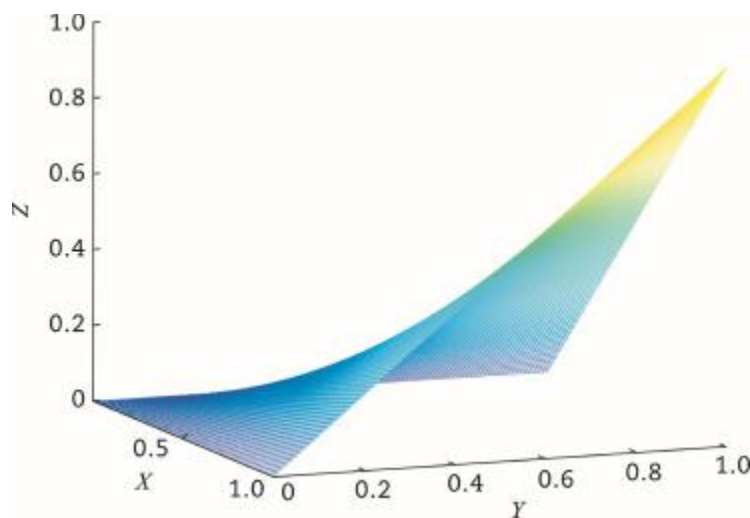
1. Download: Download high-res image (178KB)

2. Download: Download full-size image

Fig. 1. Probability of the ideal equilibrium strategy.

Table 3. Numerical values of the strategy combination.

Strategy combination	Corresponding data
(Violation of traffic rules, strict management)	(0, 1)
(Obey traffic rules, passive management)	(1, 0)
(Obey traffic rules, strict management)	(1, 1)

Strategy combination	Corresponding data
(Violation of traffic rules, passive management)	(0, 0)

3.4. Replication dynamic equations of each game player

According to the above perceived benefits for each game player, the replication dynamic equations of the drivers and food-delivery platform are provided, respectively.

- (1)

For the food-delivery drivers, the replication dynamics formula is as Eq. (7).

(7)

The second derivative of formula is as Eq. (8).(8)

For the food-delivery platform, the replication dynamics formula is as Eq. (9).(9)

The second derivative of formula is as Eq. (10).(10)

3.5. Stability analysis of game strategy

From a traffic safety perspective, an analysis of the player decision-making behaviors for food-delivery drivers centers around the choice of equilibrium strategies by the delivery staff and the delivery platform. According to the stability theorem and the dynamic game theory of replication, "k" is evolutionary stable strategy () point when the conditions of and are satisfied. Based on the above assumption, the cost of "compliance with traffic rules" for delivery staff must be less than the cost of "non-compliance with traffic rules", so the stable state of the game can only be judged according to the relationship between the net income of "the positive management strategy" and "the negative management strategy" when the delivery platform implements different strategies. The different decision-making behaviors are discussed in detail below.

- (1)

Stability analysis of the game strategy when the net income of a "positive management" approach in the food-delivery platform is greater than the net income of "negative management" approach.
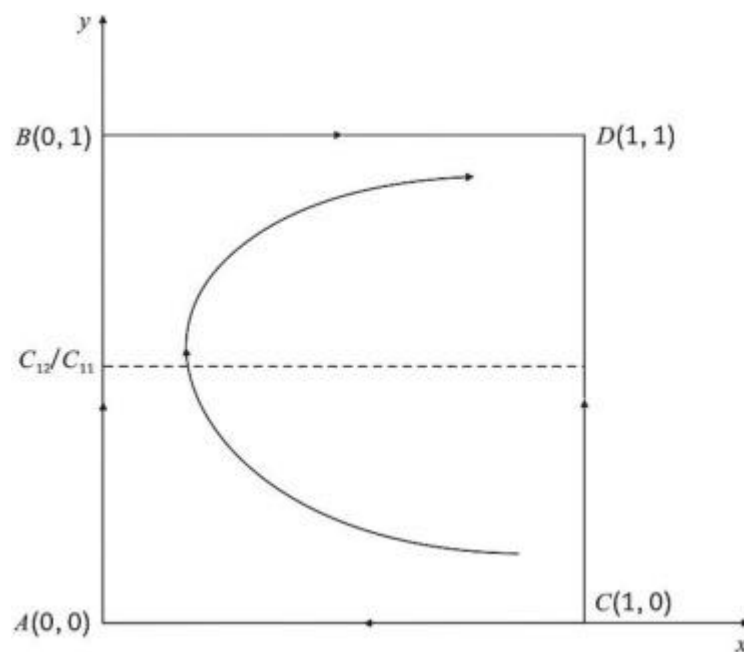
When the net income of an "active management" approach on the food-delivery platform is greater than a "negative management" approach (case 1), that is , . According to the replication dynamic equation of the delivery platform, is always established, so all the equilibrium points are located on the boundary, and as such there is no internal equilibrium point.

Combining the replication dynamic equation of the drivers and the food-delivery platform, that is, when , the equilibrium solution of the game can be obtained as: , , , . The Jacobian matrix formed by and is shown as Eq. (11).(11)

By calculating the determinant symbol and eigenvalue of the Jacobian matrix, the stability of the four equilibrium points is analyzed. The results are shown in Table 3. Among the four equilibrium points, only point has local stability, point is an unstable equilibrium point, and points and are saddle points. According to Table 4, the dynamic phase diagram of replication for the evolutionary game between the drivers and the food-delivery platform in this case is shown in Fig. 2.

Table 4. Stability analysis of evolutionary game between food-delivery platform and drivers (case 1).

Equilibrium point	Determinant symbol	Eigenvalue	Eigenvalue symbol	Stability
	−			Saddle point
	−			Saddle point
	+			Unstable
	+			Stable

1. Download: Download high-res image (86KB)

2. Download: Download full-size image

Fig. 2. Copying dynamic phase diagram of evolutionary game between food-delivery platform and drivers (case 1).

Fig. 2 shows that when the net income of using a strict management approach on the food-delivery platform is greater than the net income of a passive management approach, the probability of the food-delivery platform using a strict management strategy gradually increases. However, the type of strategic choice used by food-delivery drivers will also change as this probability increases. When y is less than , the probability of a strict management strategy being used by the food-delivery platform is small, while the probability of the drivers choosing a strategy of non-compliance with traffic rules increases; when y is greater than , the probability of a strict management approach being used by the food-delivery platform is greater. In this instance, the strategy of the drivers gradually changes from one of non-compliance to compliance with traffic rules, with the probability of choosing compliance gradually increasing.

- (2)

Stability analysis of the game strategy when the net income of the "strictly managed" delivery platform is less than the net income of a "negative management" approach.

When the net income of an "active management" approach by the food-delivery platform is less than a "negative management" approach, that is, , and can be obtained.

- 1)

When (case 2), is always established, therefore all equilibrium points are located on the boundary, and there is no internal equilibrium point. Combining the replication dynamic equation of the food-delivery platform and drivers, that is, when , the equilibrium solution of the game can be obtained as: , , , .

By calculating the determinant symbol and eigenvalue of the Jacobian matrix, the stability of the four equilibrium points is analyzed. The results are shown in Table 4. From this, we are able to see that among the four equilibrium points, only point has local stability, point is an unstable equilibrium point, while points and are located at the saddle point. According to the analysis illustrated in Table 5, the dynamic phase diagram of replication of the evolutionary game between the drivers and the food-delivery platform is shown in Fig. 3.

Table 5. Stability analysis of evolutionary game between food-delivery platform and the drivers (case 2).

Equilibrium point	Determinant symbol	Eigenvalue	Eigenvalue symbol	Stability
	+			Stable

Equilibrium point	Determinant symbol	Eigenvalue	Eigenvalue symbol	Stability
	+			Unstable
	−			Saddle point
	−			Saddle point
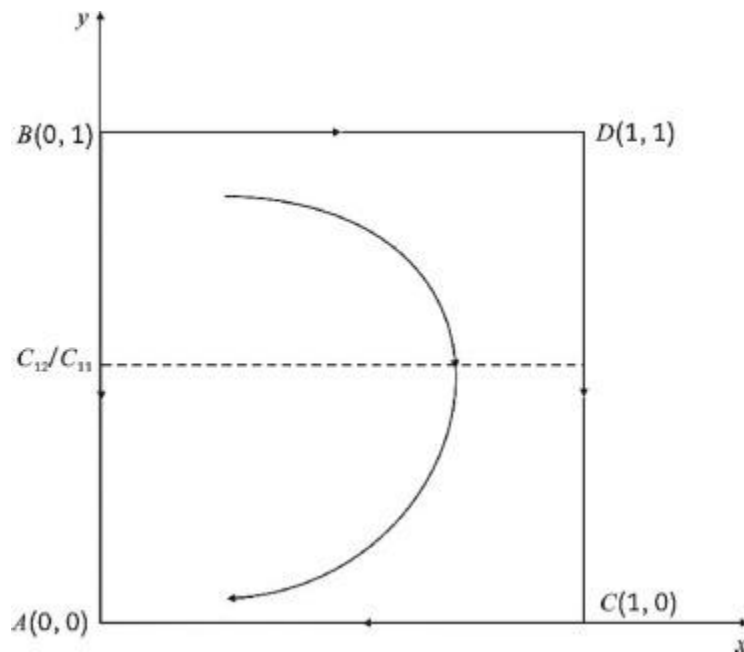
1. Download: Download high-res image (92KB)
2. Download: Download full-size image

Fig. 3. Copying dynamic phase diagram of evolutionary game between food-delivery platform and drivers (case 2).

As Fig. 3 shows, when the net income of the strictly managed food-delivery platform is greater than the passively managed net income, and is satisfied, the cost of using an active management approach by the food-delivery platform is greater than the sum of the penalty cost inflicted on reputation value. Therefore, the food-delivery platform will choose a passive management strategy, that is, its probability of choosing passive management gradually increases. Similarly, during the process of increasing the probability of negative management practices being used within the food-delivery platform, the strategy used by food-delivery drivers changed from one of obeying the traffic rules to one of non-compliance with the regulations. When y is greater than , the probability of applying strict management processes within the food-delivery platform is greater. The probability that the drivers choose to comply with the with traffic rules

gradually increases; when y is less than , the probability of adopting a strict management approach within the delivery platform is low, and as such a more negative management strategy is used. At the same time, the probability of the drivers choosing to adopt a strategy of non-compliance with the traffic rules increases. In the end, the evolutionary game stabilization equilibrium strategy under this situation (non-compliance with traffic rules, passive management) is realized, which is the result that the TADs least want to see.

- 2)

When (case 3), and , combining the replication dynamic equation of the food-delivery platform and drivers, that is, when , the equilibrium solution of the game can be obtained as: , , , , , where point is an internal equilibrium point.

By calculating the determinant symbol and eigenvalue of the Jacobian matrix, the stability of the five equilibrium points is analyzed. The results are shown in Table 6, where and both have local stability, and have an unstable equilibrium point, . The dynamic phase diagram of replication for the evolutionary game between the drivers and the food-delivery platform is shown in Fig. 4.

Table 6. Stability analysis of evolutionary game between food-delivery platform and drivers (case 3).

Equilibrium point	Determinant symbol	Eigenvalue	Eigenvalue symbol	Stability
	+			Stable
	+			Unstable
	+			Unstable
	+			Stable
	−			Saddle point
(Internal equilibrium point)				
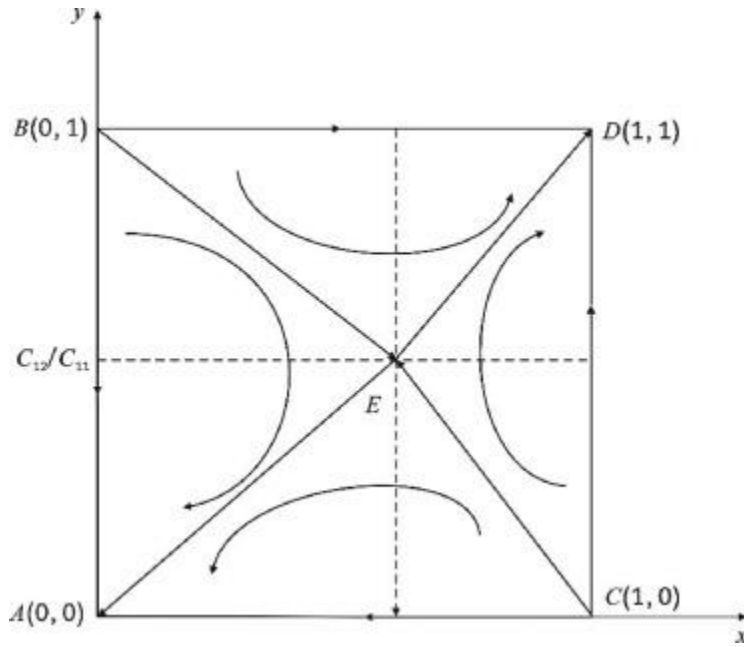
Fig. 4. Copying dynamic phase diagram of evolutionary game between food-delivery platform and drivers (case 3).

As Fig. 4 shows, when the net income of the strictly managed food-delivery platform is greater than the net income of those firms that take a passive management approach, and is satisfied, the result of the game equilibrium between the drivers and the food-delivery platform is related to the initial state and the relative position of saddle point . When the initial state is in the area, the game equilibrium will converge to the stable equilibrium point , which is the least optimal result for the TADs. When the initial state is in the area, the game equilibrium will converge to the stable equilibrium point , which is the most stable equilibrium state. Therefore, the TADs need to take certain measures to expand the area, while also reducing the size of the area, that is, the saddle point moves to the lower left.

Therefore, it is important to analyze which factors can promote the equilibrium result of the game to move to point $D(1, 1)$, that is, the parameters affecting the area of *DBECD* region need to be analyzed. Where, the area of *DBECD* region can be expressed as Eq. (12).(12)

Eq. (12) shows the parameters affecting the area of *DBECD* include C_{11}, C_{12}, C_{21}, C_{22}, C_{23} and R_{21}. S_{DBECD} was used to take partial derivatives of these parameters respectively. "+" was used to represent the positive correlation, "−" was used to represent the negative correlation, and "/" was used to

indicate that the correlation could not be identified. The results obtained were shown in Table 7.

Table 7. Analysis of parameter influence.

Parameter	Partial derivative	Impact on S_{DBECD}
C_{11}	>0	+
C_{12}	<0	–
C_{21}	<0	–
C_{22}	<0	–
C_{23}	>0	+
R_{21}	>0	+

As shown in Table 7, there is a positive correlation between S_{DBECD} and the penalty cost (C_{11}) paid by takeout delivery personnel for choosing the strategy of "not abiding by traffic rules", the penalty cost (C_{23}) incurred by traffic management departments for takeout delivery platform adopting a negative management strategy, and the reputation incentive (R_{21}) brought by platform adopting strict management measures. As C_{11}, C_{23}, and R_{21} increase, S_{DBECD} increases. On the contrary, the cost C_{12} paid by the delivery staff for choosing a "complying with traffic rules" strategy, the time and material cost C_{21} for the delivery platform choosing the "strict management" strategy, and the risk cost C_{22} brought to the platform due to strict supervision are all negative to S_{DBECD}. Furthermore, when C_{12}, C_{21} and C_{22} increase, S_{DBECD} will decrease instead.

Therefore, in order to expand the area of the *DBECD* and achieve an ideal game equilibrium result, the government can play an influential role in guiding the types of managerial approaches adopted by the food-delivery platforms. For example, increases in the reputation incentive (R_{21}) of adopting a strict management strategy or by increasing the penalty of negative management (C_{23}) which encourages the movement of the saddle point to the lower left, so that the game equilibrium converges to the equilibrium point , and in doing so achieve an ideal and stable equilibrium strategy that is not only compliant with traffic rules but also embraces a strict management approach.

4. Discussion

To present the above theoretical research results more intuitively, a model application was conducted in this study which is based on numerical simulations. This model assesses the traffic safety aspects of the food-delivery industry, by testing the impacts of different factors on the decision-making behaviors of both the food-delivery drivers and the food-delivery platform.

- (1)

When the net income of the "strict management" strategy used by the food-delivery platform is greater than the net income of a "negative management" strategy, that is , let , , , , , be the initial value. The dynamic evolution trajectory of the equilibrium strategy of the game between the drivers and the delivery platform is shown in Fig. 5. In this instance, when the TADs introduce control measures to strictly manage the traffic violations of the drivers, it will at the same time increase the costs a food-delivery platform will face for applying a strict management strategy, while also increasing its penalties associated with adopting a negative management approach. It is therefore imperative that platforms work to encourage drivers to comply with traffic rules. At different initial probabilities, the game equilibrium gradually approaches point . The strategy of compliance with traffic rules and strict management becomes the only evolutionary equilibrium strategy, which is the most ideal and stable equilibrium strategy. To verify the reliability of this result, we select a different set of initial values again, and let , , , , , be the initial value. We can see that the results are consistent.

- (2)

When the net income of the "strict management" delivery platform is less than the net income of the "negative management" strategy, that is, , and , let , , , , and be the initial values. The dynamic evolution trajectory of the equilibrium strategy of the game between the drivers and the delivery platform is shown in Fig. 6. According to Fig. 6, under different initial probabilities of compliance with traffic rules, and the adoption of strict management strategies, the system will eventually converge to the only stable equilibrium point , and the strategy combination is one of non-compliance with traffic rules and a passive management approach. This is due to the cost of a delivery platform adopting a strict management approach is too high, so that it has no incentive to strictly manage its drivers, which leads to the prevalence of poor driving behavior in which the drivers do not follow the traffic rules. This result is the most unreasonable from the perspective of urban public traffic safety or the long-term development of the food-delivery industry. Again, we select a different set of initial values to verify the reliability of the results, and let , , , , , be the initial value. We can see that the trend of the two graphs is roughly the same.

- (3)

When the net income of the "strict management" food-delivery platform is less than the net income of the "passive management" strategy, that is, , and , let , , , , and be the initial values. The dynamic evolution trajectory of the equilibrium strategy of the game between the drivers and the delivery platform is shown in Fig. 7. According to Fig. 7, under different initial probabilities of traffic rule compliance and the adoption of a strict management strategy, the game equilibrium may converge at point or point . The specific convergence position is related to the initial state and the position of the saddle point. The government can change the position of the saddle point by increasing its level of regulation and control over the industry, so as to make the equilibrium approach the ideal state point , which is one of compliance with traffic rules and the adoption of a strict management strategy; representing the most stable and balanced approach by government. When we select a different set of initial values again, let , , , , and be the initial value. We see a slight shift in the position of the saddle points, but the result remains the same.

Meanwhile, according to Table 7, the size of parameters (C_{11}, C_{12}, C_{21}, C_{22}, C_{23} and R_{21}) in the equation has a certain influence on the final evolution result of the game. For example, assuming the initial value (case 1) , , , , , , and , according to the different influence relationship of each parameter on S_{DBECD} in Table 7, We make the corresponding changes to the variables (case 2), and let , , , , and , so as to analyze the comprehensive influence of these parameters on the game evolution results. The dynamic evolution results are shown in Fig. 8.
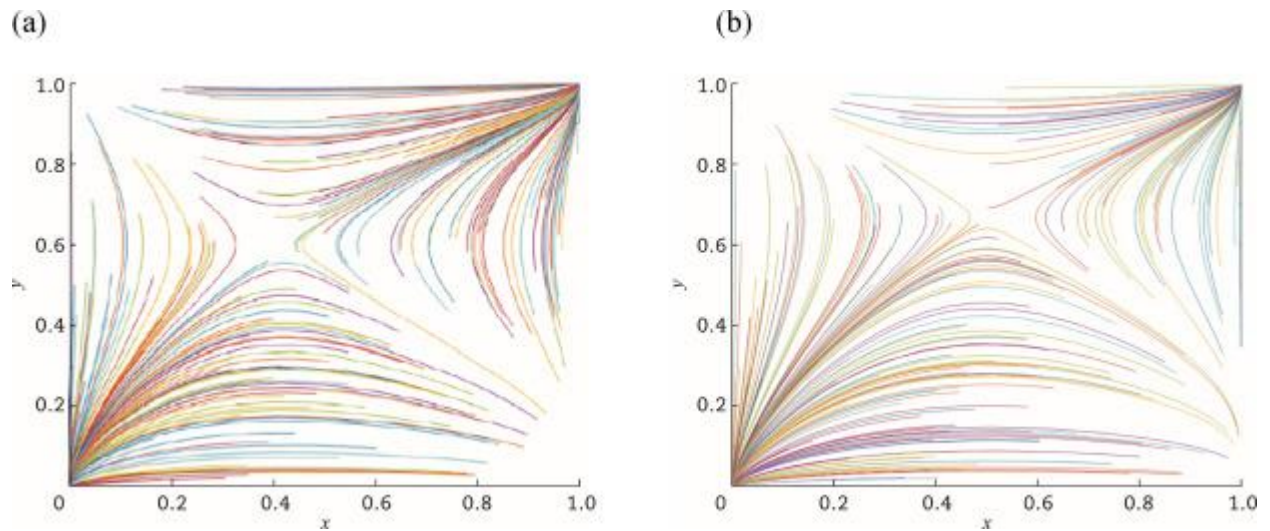
(a)   (b)
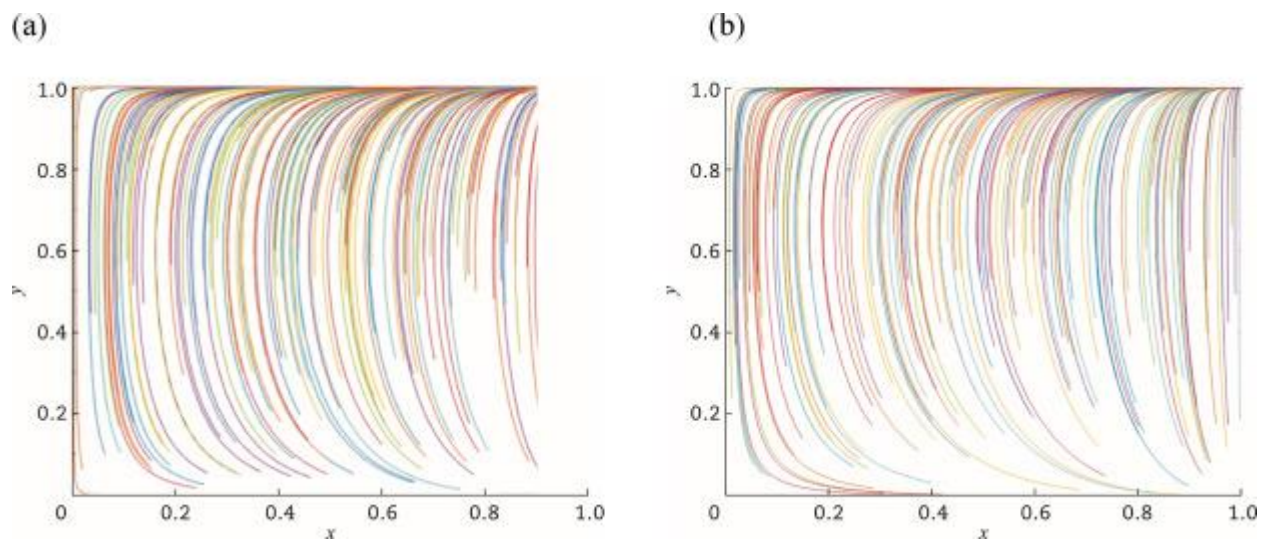
1. Download: Download high-res image (773KB)

2. Download: Download full-size image

Fig. 5. Trajectory of the evolutionary game between the drivers and the food-delivery platform (case 1). (a) $C_{11} = 5$, $C_{12} = 3$, $C_{21} = 2$, $C_{22} = 3$, $C_{23} = 5$, $R_{21} = 5$. (b) $C_{11} = 6$, $C_{12} = 4$, $C_{21} = 3$, $C_{22} = 4$, $C_{23} = 6$, $R_{21} = 6$.
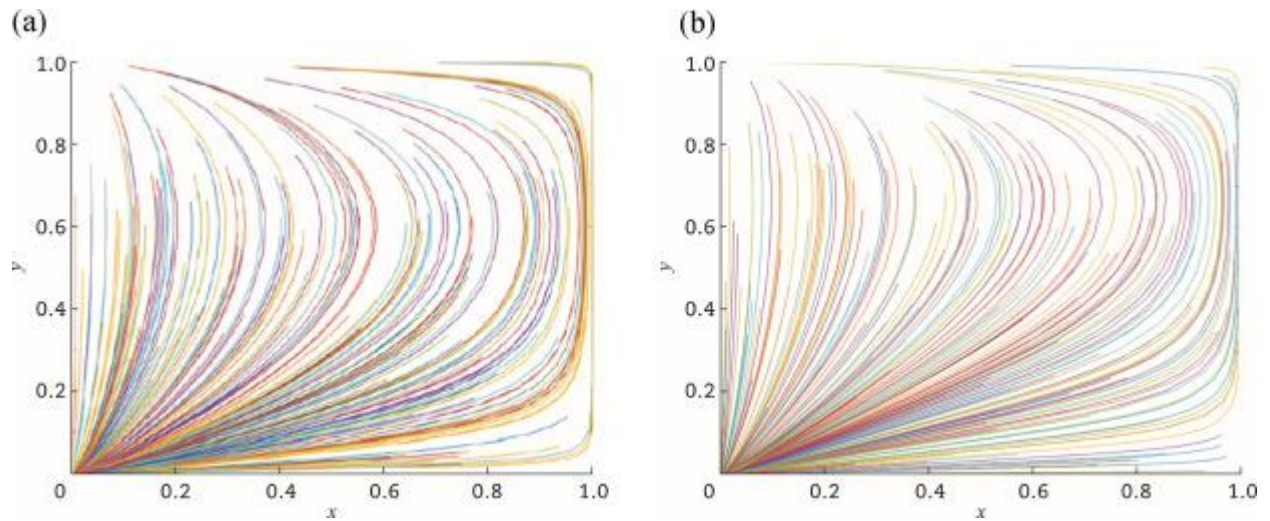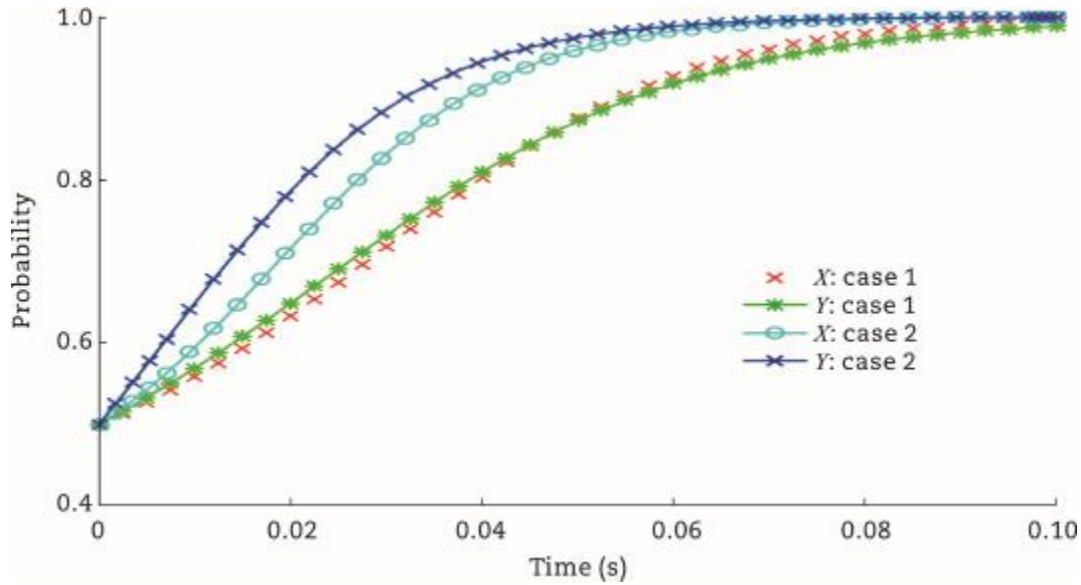

1. Download: Download high-res image (915KB)

2. Download: Download full-size image

Fig. 6. Trajectory of the evolutionary game between the drivers and the food-delivery platform (case 2). (a) $C_{11} = 5$, $C_{12} = 3$, $C_{21} = 11$, $C_{22} = 3$, $C_{23} = 5$, $R_{21} = 5$. (b) $C_{11} = 6$, $C_{12} = 4$, $C_{21} = 13$, $C_{22} = 4$, $C_{23} = 6$, $R_{21} = 6$.

1. Download: Download high-res image (730KB)

2. Download: Download full-size image

Fig. 7. Trajectory of the evolutionary game between the drivers and the food-delivery platform (case 3). (a) $C_{11} = 5$, $C_{12} = 3$, $C_{21} = 9$, $C_{22} = 3$, $C_{23} = 5$, $R_{21} = 5$.
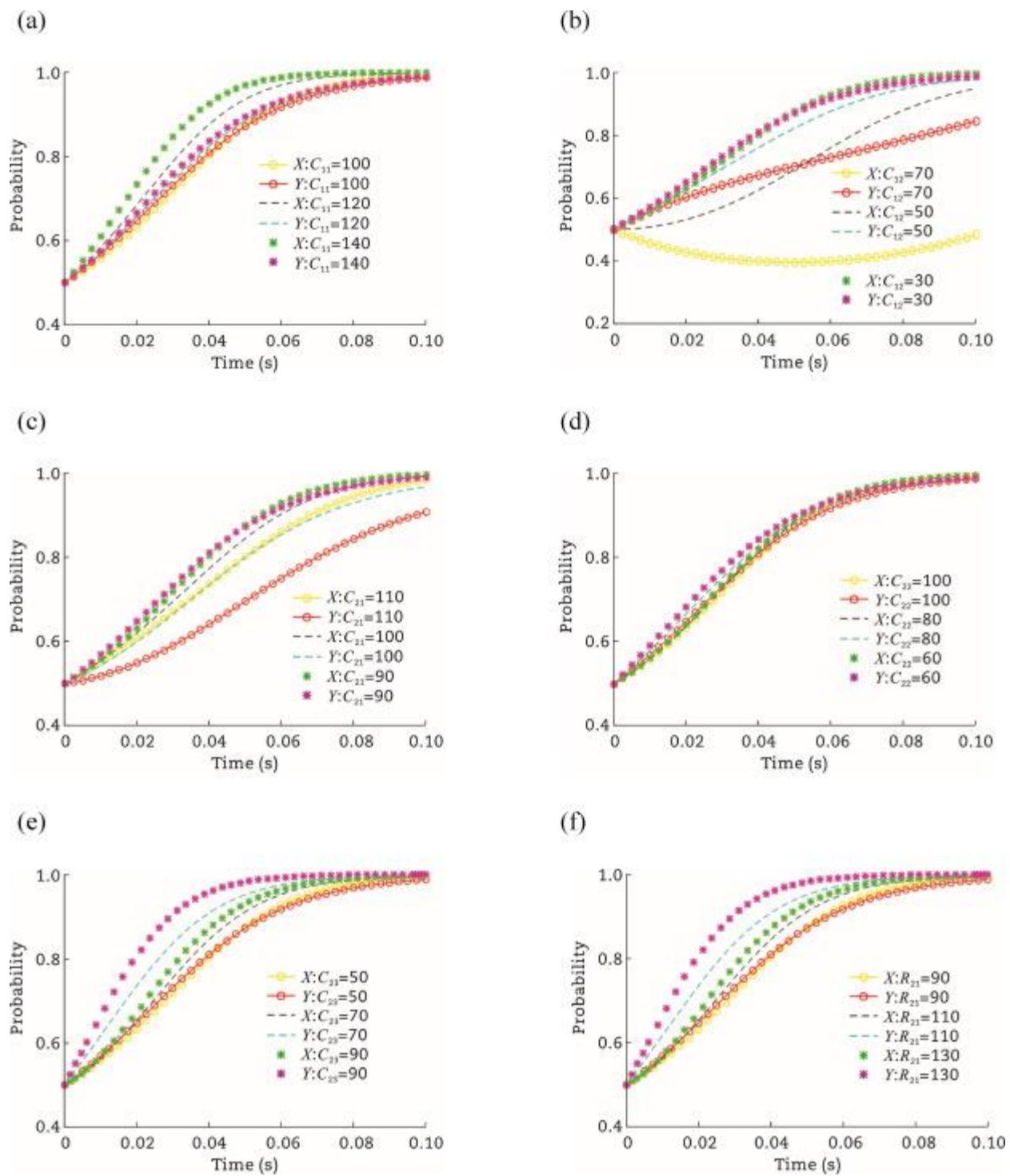(b) $C_{11} = 6$, $C_{12} = 4$, $C_{21} = 11$, $C_{22} = 4$, $C_{23} = 6$, $R_{21} = 6$.

1. Download: Download high-res image (237KB)

2. Download: Download full-size image

Fig. 8. Dynamic evolution results of parameter changes.

We found that after making a parameters adjustment, the decision-making probability of each game subject tends to get to "1" more quickly. Next, we analyze these parameters and their effect on S_{DBECD} respectively and observe the influence of an increase or decrease of these parameters on the game evolution process and results.

Fig. 9 illustrates the trend of the evolution results of each game subject, when adjusted for each parameter. The figure shows that parameters C_{11}, C_{23} and R_{21} have a positive correlation with the dynamic evolution results for both sides of the game, while parameters C_{12}, C_{21} and C_{22} have a negative correlation with the dynamic evolution results for both sides of the game. When the parameters C_{11}, C_{23} and R_{21} increase or the parameters C_{12}, C_{21} and C_{22} decrease, the probability of delivery personnel choosing to "obey traffic rules" and the probability of delivery platform choosing to adopt a "strict management" will rapidly increase.

Fig. 9. Dynamic influence of each parameter on evolution result. (a) Evolutionary trajectory under different C_{11}. (b) Evolutionary trajectory under different C_{12}. (c)

Evolutionary trajectory under different C_{21}. (d) Evolutionary trajectory under different C_{22}. (e) Evolutionary trajectory under different C_{23}. (f) Evolutionary trajectory under different R_{21}.

5. Conclusions

This study uses evolutionary game theory to analyze the game evolution process and stabilization strategies that exist between the food-delivery platform and their drivers, when the TADs have increased their management and enforcement of electric vehicle traffic violations. For the purpose of this study, we examine the crowd-sourced food-delivery service, which differs from the traditional food-delivery service industry. Our research showed that when the net income of the "strict management" strategy used within the food-delivery platform is greater than the income of its "negative management" strategy, the business is able to achieve a stable and balanced state of operation that complies with the relevant traffic rules and embraces a strict management approach; which is the kind of operational state the TADs expect to see from businesses operating in this industry. Such behavior, is conducive to developing an effective food-delivery market and the formation of a safe urban transportation system. From an evolutionary game theory perspective, when the net income of the "strict management" delivery platform is less than its "negative management" strategy and , the stable equilibrium strategy of the two players is one of non-compliance with traffic rules and the adoption of a passive management approach, which provides for a so-called "prisoner's dilemma" situation. This balanced result is not conducive to forming a normal delivery mechanism within the food-delivery industry, moreover, it can also endanger the safety of the urban public transportation system. When the net income of the "strict management" delivery platform is less than its "negative management" alternative and , the game equilibrium has two stable equilibrium strategies. The first, is one of compliance with traffic rules and the adoption of a strict management strategy, which is an ideal evolutionary state. The other, is one is non-compliance with traffic rules and the adoption of a passive management strategy, which represents a failed evolutionary state. In this context, the TADs can promote the evolution of the game towards a stable equilibrium state in which traffic rules are complied with and a strict management approach is followed by changing the intensity of its macro-control mechanisms. By increasing their macro-controls, by either providing addition compensation or incentives to business, the TADs can facilitate organizational change that sees the number of food-delivery platforms that use stricter management approaches increase. The TADs can also increase the types of penalties or fines that food-delivery drivers must face for traffic violations, thereby controlling or reducing the risk that food-delivery drivers will not follow the relevant traffic rules, while at the same time promoting the evolution of the game direction to ensure compliance with the traffic rules and the adoption of strict management strategies. When government regulation is

relatively weak, the cost of a strict management approach by the food-delivery platform is greater than the penalty cost associated with the use of a passive [management style](). In this instance, the platform will be more inclined to choose a passive management strategy which allows the organization to operate in a manner that represents its own best interests. In doing so, it will condone illegal driving behavior in which food-delivery drivers do not comply with the traffic rules.

Under the control of the TADs, the evolutionary game between the food-delivery platform and drivers contains different stability strategies that are created based around different initial conditions. Moreover, the development of an organized and well-regulated food-delivery industry will also improve the overall status of the urban [public transport]() travel system. In terms of the differences in net income that exist across the strict and passive management strategies, the TADs need to change their regulatory provisions surrounding compensation (for strict management) and punishment (for passive management) for those operating within the delivery platform. This can be done by strengthening the management of the food-delivery platform, so that it can be more proactive and ensure that drivers are more strictly managed. These fundamental changes would ensure that the overall Internet plus food-delivery industry employs drivers that not only abide by traffic rules when delivering meals, but also play a [pivotal role]() in reducing the number of traffic accidents occurring across the urban landscape. Furthermore, this study can provide important insight as to how an instant delivery platform can optimize its orders improve traffic safety, while also reducing social logistics costs and security risks.

Despite its important contributions, this study has limitations that could be addressed in future research. The research on traffic safety management for takeout distribution platforms is constantly evolving. Although out study uses game theory to discuss and analyze the industry, there are still some deficiencies in the methodological approach we adopted. First, the numerical simulation part should use actual cases as part of future analyses ([Wang et al., 2021b]()). Moreover, as this study shows, the control of TADs has a great influence on the game stability strategy. In the future, we will consider introducing "platform enterprises" to discuss the tripartite evolutionary game analysis of introducing TADS. Finally, using an evolutionary game with multi-agent participation will also help to improve the shortcomings of the study.

Food Delivery App Development: A Comprehensive Guide

The history of online food ordering applications dates back to 1995 when the U.S.A. got its first online food delivery platform, Worldwide Waiter. Today, we have a highly thriving food delivery app market with spectacular global revenue statistics. This market offers an opportunity for business idea seekers and entrepreneurs to enter.

Before we begin developing mobile applications, let's learn more about today's online food delivery market.

If you are planning to build a food delivery app, then here are some of the best food delivery apps that are ruling the global food delivery market:

- Uber Eats
- DoorDash
- Postmates
- Deliveroo
- Zomato
- Grubhub
- Instacart
- Just Eat
- Swiggy
- Delivery Hero
- Domino's Pizza
- Talabat

In 2023, Uber Eats was the most downloaded food delivery app in France and the second most downloaded app in the US. By 2028, the online food delivery market is forecast to generate revenues reaching 1.8 trillion U.S. dollars.

In 2023, food delivery revenues worldwide were estimated at just over one trillion U.S. dollars, of which 400 billion dollars were generated in the meal delivery segment.

A survey reveals that 70% of consumers want to order online directly from restaurants instead of marketplaces.

These figures are enough to clarify doubts about investing in food delivery app development.

Moving forward, let's consider whether investing in a food delivery app would be a good decision for you in 20204.

Is it worth creating a food delivery app in 2024?

Have you noticed how ordering food has become so much easier these days? In 2024, the rise of food delivery apps isn't just a trend—it's a fundamental shift in how we dine.

Recent studies highlight a staggering increase in online food delivery orders, with projections showing global growth. The revenue in the [Online Food Delivery market](#) is forecasted to reach US$1.22tn in 2024.

*It is expected to exhibit a **compound annual growth rate (CAGR 2024-2029) of 9.49%**, resulting in a projected market volume of US$1.92tn by 2029.*

This surge isn't just about convenience; it's about meeting the evolving needs of busy consumers who crave efficiency without compromising on choice or quality.

Today, platforms like DoorDash and Uber Eats exemplify this transformation, connecting millions of users with various restaurants and cuisines at their fingertips. These apps have simplified the process of ordering food and expanded into delivering groceries and partnering with local businesses, catering to a broader spectrum of consumer needs.

Behind this success lies sophisticated technology that ensures orders are processed swiftly and accurately, while features like real-time tracking provide transparency and peace of mind.

As we delve deeper into this market, it's clear that the appeal of food delivery apps lies in their convenience and ability to adapt and innovate. Advances in artificial intelligence are enhancing user experiences and operational efficiencies, and these apps are reshaping how we think about dining out or enjoying a meal at home.

If you're considering starting in this field, the chances for growth and profit look good. A rising number of customers want easy, diverse dining options. Looking forward, food delivery apps will keep changing how we eat, opening up exciting possibilities for customers and businesses.

Food Delivery App Development: Step-by-Step Guide

Now, how do you make a food delivery app, or what steps should you take while building one? This guide will clarify everything.

Building a delivery app can seem overwhelming, but we're here to simplify it. We'll break down the process of creating a food delivery app and the steps that should be considered when building one for your business. In later stages, we will also discuss the cost of food delivery app development, so stay tuned.

Step 1: Understanding The Market

Market research and understanding are crucial in developing an on-demand food delivery app. Business owners can't jump right into the idea of not just a food delivery app, or any app for that matter, without knowing its market (audience, competition, trends, and more).

Knowing the food delivery market would enable you to connect with the customers effectively, gain competitive intelligence, fish outgrowth opportunities, identify gaps, and ultimately make informed decisions.

When researching market research, here are some of the crucial aspects to analyze:

- Audience demographics
- Competition
- Consumer demands
- Common trends

This would allow for understanding key demographics, such as audience characteristics, preferences, target needs, user behavior, and more.

Upon realizing these aspects, the next phase of market research is to:

- Fill the void/demand gap
- Analyze strengths and weaknesses
- Understand the pain point of the users
- Explore unreached segments
- Find product improvement possibilities
- Choose revenue-generation opportunities

Market research's two most important aims are to realize your Unique Selling Proposition (USP) and business model. The above realization will help you find your USP.

Let us further understand your business model for an on-demand food delivery app.

On-demand Food Delivery App Development Types

The goal of food delivery apps is to generate revenue. These types of on-demand food delivery applications enable you to select the model that best suits your business requirements, goals, and budget.

Here are the types of food delivery app development:

Restaurant-To-Consumer Delivery

In this type of food delivery app, your software development partner must develop the app for a single restaurant or restaurant chain. Customers can order food from any particular restaurant using the app. The restaurant is solely responsible for managing its delivery service and logistics.

For example – Domino, Mc McDonald

Platform-To-Consumer Delivery (Aggregator)

Contrary to the above model, in this type of food delivery app, the aggregator enables various restaurants from a city to connect with customers through a single platform so they can order from any of these restaurants from a single on-demand food delivery application. These platforms charge the restaurant and customers fees for using the platform or their services.

For example – Uber Eats, Doordash, Deliveroo, Zomato, Grubhub, etc

Further, this model is differentiated into two types; one is the app where the aggregator only manages the orders and not the delivery, while in the other, the aggregator also manages the delivery.

Let us explore these models further in detail.

Order-Only Model

In this food delivery app model, the aggregators only manage the orders for the multiple restaurants registered with the platform, while the restaurant must employ delivery services. The aggregator is an intermediary to replace the restaurant's antiquated phone-ordering system with an optimized web and mobile on-demand food delivery platform.

For Example – JustEat, Delivery Hero, Eat24, etc.

Order & Delivery Model

In this type of food delivery app model, the aggregator retains control over processing orders for multiple restaurants and delivering them either with a fleet of delivery drivers or by collaborating with third-party courier services.

For Example – Zomato, Uber Eats, DoorDash, Swiggy, etc.

Step 2: Outline the Key Food Delivery App Features

One of the most useful outcomes of detailed market research is learning the functional scope of the various food delivery apps available to see what else you can add to offer value to the customer.

An ideal food delivery application ecosystem includes a consumer, Restaurant(merchant), courier, and admin app (in the case of the platform to aggregator model).

Here are some of the essential features to be considered for the on-demand food delivery app development:

Customer App

- Login/Registration
- Search Menu
- Search Filter
- Cart
- Re-Order
- Payment Integration
- Order Tracking
- Order History
- Real-time Location
- Push Notification
- Rating and Review
- Customer Support
- Nearby Restaurants
- Coupon Management
- Social Media Login
- Help & Support

Courier (delivery) App

- Login/Registration

- User Profile

- Alert and Notification

- Customer Information

- Order Management

- Availability Settings

- In-App Navigation

- View Earnings

- Updating the Order Status

- Order History

Restaurant (merchant) App

- Login/Registration

- Manage Business Info

- Order Management

- Menu Management

- Push Notification

- Real-time Tracking of Driver

- Manage Offers & Discounts

- Loyalty Program

- Payment History

- Reply To Reviews

- Customer Details

- Help & Support

Admin Panel

- Admin Login

- Restaurant Management

- Customer Management

- Driver Management

- Order Management

- Payment Management

- Commission Administration

- Delivery zone Management

- Discount Offers and Coupons

- Promo Codes

- Push Notifications

- Real-time Updates

- Technical Assistance

- Analytics Tools

- Campaign Management

- Email Alerts

Advanced features to consider for on-demand food delivery app development

- Role-Based Dashboards

- Multiple Payment Modes

- CRM Integration

- CMS Integration

- ChatBot Integration

- Mobile Wallet Integration

- AI-driven Features

- Smartwatch Integrations

- Geotargeting

- Gamification

- Floating Window

- Driver Tip & Ratings

- In-App Call/Chat Option

- Route Optimisation

- Marketing Features

- Two-factor Authentication

- Personalized Suggestions

- Multiple Payments

- In-App Navigation

Step 3: Consider the App Development Cost

App development costs are critical and require careful evaluation and strategic planning. From my experience in the field, I can tell you that app development costs can vary significantly based on several factors, including –

- The complexity of the app,

- The features you want to include,

- The platforms you're targeting (iOS, Android, or both) and

- The geographical location of your mobile app development team

First, break down the costs into two main categories:

- Upfront costs and

- Ongoing costs

Upfront costs include design, development, testing, and initial deployment. Ongoing costs encompass maintenance, updates, server hosting, and marketing.

When budgeting, it's essential to have a clear scope of work. Detailed planning and precise requirements help avoid scope creep, which can lead to unexpected cost increases.

Consider creating a Minimum Viable Product (MVP) first to validate your idea and gather user feedback without immediately committing to a full-scale launch.

Another important aspect is choosing between an in-house team and outsourcing. In-house teams offer better control and direct communication but can be expensive due to salaries, benefits, and overheads.

Don't forget to account for hidden costs, such as third-party integrations, licensing fees, and unforeseen technical challenges. Transparency with your development team about budget constraints can help them tailor solutions that align with your financial plan.

Step 4: Choose an App Development Company

Choosing the right app development company is crucial when creating a food delivery app. **Look for a company with a proven track record** in developing similar applications. They should have experience integrating key features like real-time order tracking, secure payment gateways, and user-friendly interfaces.

Consider their expertise in UI/UX design to ensure your app is intuitive and visually appealing, which enhances user engagement. Additionally, **verify their ability to scale the app** as your business grows and adapt to future technological advancements.

Check client reviews and portfolios to gauge their reliability and quality of work.

Communication and collaboration are also vital, so **choose a company that communicates effectively** and understands your vision for the app.

You can also hire mobile app developers from a reputable company hourly.

Step 5: Creating The App Concept And User Journey

Once you have a clear idea of the food delivery app, its USP, business model, and features, the next phase is to bring the app idea to life. To bring the app's visual architecture to life, prototyping and user experience/user interface (UX/UI) designing would enable you to create a detailed blueprint for your food delivery app.

This step, which involves creating low-fidelity wireframes, outlining the app's structure and user flow, and creating the high-fidelity design, is crucial for companies providing food delivery app development services, as it creates the customer's experience of the app.

An expert team of designers and analysts finalizes every detail, from logic to navigation for the product, image placements, usability sequences, aesthetics, brand styling, and other excessive details, to build an app that delivers user engagement and can withstand the test of time. The app's UI can influence the consumer's decision-making process, so every small detail of the food delivery application is carefully planned with the customers in mind.

Once your team of UI/UX designers has the design ready, it is passed on to the developer to work on the technical side of the application.

Step 6: Select the Tech Stack

The next step in developing a food delivery application involves defining the tech stack and developing a minimal viable product (MVP). This typically includes decisions on programming languages, databases, servers, APIs, and other development components.

Here is the detailed tech stack for an ideal food delivery app, which every food delivery app development company can use.

The team required to develop a food delivery application:

- Project Manager
- Android/iOS Developers
- Front-end & Backend Developers
- UX/UI Designers
- Quality Analysis Experts
- Delivery Manager
- Business Analyst

Tech Stacks, which you can choose to develop your app with –

Front End

Registration	Facebook SDK, Gmail SDK, Auth0
Payment	Stripe, Braintree, PayPal, Apple Pay, Google Pay, BHIM, Net
User Location	Google's Geolocation API for Android, CoreLocation framewor
Navigation	MapKit, Google Directions APIs, Routific, TomTomm
Messaging	Twilio, Plivo, MessageBird, Nexmo
Programming Language	JavaScript, TypeScript, Java, Swift, Kotlin,
Markup Language	HTML5, CSS
Framework	Flutter, React Native, Angular, Vue.js
Push Notifications	Firebase Cloud Messaging, Apple Push Notification service, P SNS

Realtime Analytics	Storm, Flink, Google Analytics, Cisco, IBM, Apple Analytics
UI/UX	Figma, Sketch, Photoshop, Illustrator
Storage	Azure, Google Cloud Storage, AWS

Back End

Programming Language	Python. PHP,
Framework	Ruby on Rails, Laravel, Symfony, Django
Cloud	Azure, Google, AWS
Database	PostgreSQL, HBase, MongoDB, Cassandra, MySQL
Caching Tool	Memcached, Redis
Server	AWS, Azure
Web server software	Apache HTTP Server, Nginx

The team required to develop a food delivery application –

- Project Manager

- Android/iOS Developers

- Front-end & Backend Developers

- UX/UI Designers

- Quality Analysis Experts

- Delivery Manager

- Business Analyst

Step 7: Start Development Process

Now that you have the tech stack ready to build a food delivery app, the next step is to develop the app once the designer has completed their design.

The most efficient way to develop your digital product is to develop a Minimum Viable Product (MVP) first. Then, upon analyzing the response to your MVP, decide whether you want to ditch the idea or improve it accordingly, as you don't want to end up developing a product that is not liked or used by your target audience.

MVP comprises a minimum/basic/vital feature set in which the business runner intends to test the product-market fit and gain crucial technical insights.

When developing a food delivery application like Uber Eats, the business owners decide which type of mobile app to develop. The business can either go for native, hybrid, or cross-platform app development. Here is how the most popular type of food delivery mobile app development types that plays a crucial role in the development process.

The overall cost of developing a mobile app also varies according to the development type that you choose for your food delivery app.

Native App Development

This type of food delivery application development would enable developers to create apps explicitly for a single platform(iOS/Android), which are maintained separately.

The developers use Android Software Development Kit (SDK), Android Studio, Android IDE, and IntelliJ IDEA for Android development.

Further, the development of native Android programming languages like Java, Kotlin, Scala, and C++ is used. Other tools used in Native food delivery app development include Charles Proxy, AVD Manager, Shake Bug, etc.

On the other hand, the Android codebase can't be used to deploy apps on the Apple App Store. This is when the iOS developer uses iOS development tools like Appcode, Xcode, or Atom and various other tools like Swift Package Manager, Jazzy, etc.. In contrast, programming languages like Swift and Objective-C are used.

This type of Native application development is mainly chosen by business owners who do not have a budget constraint. The code is developed separately for each software platform, which is time-consuming and cost-intensive.

With it, developers can achieve high reliability and functionality in the application, allowing them to take full advantage of their chosen platform's capabilities.

Cross-platform App Development

On the other hand, cross-platform app development uses the "write once, run anywhere" coding paradigm, which means the developer does not have to write the code separately for the platforms they have chosen without compromising the native app-like feel and user experience.

The rising popularity of cross-platform app development is owed to its lower development costs, shorter time to market, wider audience reach, and more. Cross-platform app developers use popular frameworks like Flutter, React Native, Xamarin, Cordova, and more to develop cross-platform food delivery apps.

Step 8: In-depth Testing and Deployment

Once the MVP or full-cycle food delivery app is developed and ready for use, before it is open for beta testing or user use, the mobile app development team must ensure that it does not have any bugs in features/functionalities that would impact the user experience.

Testing the code allows the development team to catch coding errors before the users.

Whether it is MVP, continuous development after MVP, or post-deployment maintenance, testing is crucial to keep your food delivery app bug-free and meet your users' needs.

Your QA testers can conduct various types of testing on the code of developed components and functions delivered by the developers, such as user test creation, manual testing, or automation testing, according to your preference and requirement for inspecting the code.

Types of software testing for food delivery apps:

- Functional Testing

- Security Testing

- Performance Testing

- Usability Testing

- Compatibility Testing

These types of software testing would enable the developer to test the app's functionality, usability with real users, compatibility with various devices, app integration with third-party services, and more.

Once the software testing is done thoroughly after the food delivery app development, it is time to deploy the product on the respective platform (Android and iOS) in the case of a native app or a single codebase on all platforms in the case of a cross-platform food delivery app.

Step 9: Support and Performance Monitoring

Post-deployment, the development team tracks user experience feedback, app functioning, and performance to implement improvements and fix any detected bugs.

The app and the technologies and development tools used to develop it need to be upgraded to the latest version to avoid any security issues that may make the user data prone to cyberattacks.

Support and maintenance would enable the team to continuously fix the bugs, improve performance, meet the users' needs, and keep the technologies up to date.

Alongside continuously improving the app, the team also works on marketing the food delivery application to reach the target audience and increase the user base, food delivery app downloads, app usage, and ultimately, the return on Investment (ROI).

The Scope of Developing a Food Delivery App in 2024

In today's fast-paced world, time management is one of the most prevalent challenges for the current generation. With hectic schedules and numerous responsibilities, finding time to prepare meals or dine out can often be a luxury. This is where food delivery apps step in as a practical solution.

Pain Points of Users

1. Time Constraints: Juggling work, social life, and personal commitments often leaves little time for cooking or dining out. Food delivery apps help by saving time and providing meals at your doorstep.

2. Limited Choices: Depending on where you live, dining out or ordering in can be limited. Food delivery apps expand these choices by offering a variety of cuisines and restaurants.

3. Convenience: Traveling to restaurants or grocery stores can be a hassle, especially in bad weather or heavy traffic. Food delivery apps eliminate this inconvenience by bringing your favorite meals directly to you.

When developing a mobile application for food delivery like Uber Eats, the team plays a crucial role in making your idea a reality and in determining the overall cost of developing the app.

Please explain how your development team would contribute to the cost of developing a mobile application for food delivery.

Solutions Provided by Food Delivery Apps

A food delivery app saves users the time and effort of physically visiting a restaurant. Whether at home, work, or elsewhere, users can browse menus, place orders, and have food delivered directly to their doorstep. This convenience simplifies meal planning and frees up time for other priorities.

Secondly, Modern food delivery apps offer extensive choices from various restaurants and cuisines. This variety caters to diverse tastes and dietary preferences, ensuring that users can find something they enjoy without limitations. After a certain time, you can also start providing groceries through your app, giving you more traction.

Launching a food delivery app opens up additional revenue streams for businesses. Beyond direct food sales, apps can generate income through subscription models, advertisements, and commissions from partner restaurants. This diversification can significantly boost overall profitability.

Food delivery apps transcend geographical boundaries to tap into a global audience hungry for culinary diversity. Their scalability attracts a broad customer base and facilitates partnerships with supermarkets and specialty stores, broadening the app's appeal and market reach.

Launching a food delivery app requires minimal initial investment compared to establishing a traditional restaurant. The absence of physical overheads like rent and equipment lowers startup costs, making it a feasible venture for entrepreneurs and small teams.

Finally, the cost of developing a food delivery app will depend on the number of features you want.

How Do Food Delivery Apps Make Money?

As you know, there is plenty of opportunity to grow in this market. Here are a few app monetization strategies to help you understand how the food delivery app generates revenue.

Delivery Fees

One of the most straightforward ways food delivery [apps make money](#) is through delivery fees.

Think of apps like Uber Eats and DoorDash. When you order food, you usually pay a fee to have it delivered to your doorstep.

This fee can vary based on how far the restaurant is from you or how busy the delivery drivers are at that moment.

It's a small price to pay for the convenience of not having to leave your house!

Service Fees

Next up are service fees. Apps like Grubhub and Postmates often add a service fee to each order.

This fee helps cover the costs of running the app and providing customer support.

It's like paying a little extra for the seamless ordering experience through a well-maintained platform.

Commissions from Restaurants

Restaurants also pay a commission to these apps for each order they get through the platform.

For example, when you order from your favorite pizza place on Uber Eats, a percentage of your payment goes to Uber Eats.

This can be anywhere from 15% to 30%. It's a win-win: the restaurant gets more customers, and the app earns a commission.

Subscription Models

Some apps offer subscription services. Take Uber Eats Pass or DoorDash DashPass, for instance.

Subscribers get perks like reduced delivery fees and exclusive discounts for a monthly or annual fee.

It's a great deal if you order food frequently, providing a steady revenue stream for the apps.

Advertising and Promotions

Advertising is another big revenue source. Restaurants can pay to have their listings appear at the top of your search results or to be featured prominently within the app.

For example, you might see McDonald's or Taco Bell running special promotions on these platforms.

This increases their visibility and order volume; the app makes money from these advertising fees.

In-app promotions and Exclusive Deals

Food delivery apps often have exclusive deals or promotions funded by restaurant partners.

For instance, you might get a notification about a special discount on sushi from DoorDash.

These promotions drive more restaurant orders and keep you returning to the app.

White-Label Services

Some apps also offer white-label services, which means they let restaurants use their delivery network and technology under the restaurant's brand.

For example, a local pizzeria might use Uber Eats' infrastructure to offer deliveries, but it looks like the pizzeria's own service.

The app charges a fee for this convenience.

Data Monetization

Finally, there's data monetization. Food delivery apps collect a lot of data about what people order, when, and how often.

Apps like Grubhub can analyze this data and sell anonymized insights to restaurants. This helps restaurants understand trends, optimize their menus, and improve marketing strategies.

It's like giving restaurants a secret weapon to attract more customers.