



UNIVERSITÀ DEGLI STUDI DI MILANO

Process of how a burger restaurant handles a customer's order

Course Assessment Project for Business Process Engineering

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Abstract

The BPMN software allows you to model processes in your business field. This BPMN diagram example shows the process of order processing in a burger restaurant. Customers can choose and order a burger by their preferences. The restaurant staff processes the order - accepts a payment, grills the meat, assembles the burger, and delivers the final product - the burger to the customer.

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Introduction

In the realm of gastronomy, where culinary finesse meets technological precision, the BPMN project before you unveils the intricacies of order processing in a Burger Restaurant. Imagine a world where hunger meets choice, and the journey from a craving for a Good Burger to the savory satisfaction of its consumption is not just a transaction but a carefully orchestrated symphony of processes.

Our BPMN diagram meticulously dissects the order process into a choreography of steps, each playing a crucial role in the seamless journey from customer desire to culinary delight. The process begins with a customer, "Hungry for Good Burger," evolving through a series of steps that include choosing a burger, entering an order, and culminating in the moment when the carefully crafted burger is handed over to the eager customer.

From the activation of the Payment Terminal (POS) to the rhythmic steps of grilling, turning, and assembling the burger according to the recipe, every phase in the process is captured within the BPMN framework. As customers choose their preferred payment method—whether it be a swift card transaction or the traditional exchange of cash—the BPMN diagram elegantly navigates the intricate dance of financial transactions, ensuring a seamless and secure payment process.

But our journey doesn't stop at the grill; it extends to the final crescendo when the burger is expertly packed in paper, the order is declared complete, and the customer is notified. The BPMN diagram not only serves as a visual guide to this culinary symphony but also as a tool for enhancing operational efficiency and customer satisfaction.

Join us as we explore the BPMN-driven optimization of the Burger Restaurant order processing system, where each step in the process is not just a task but a note in the symphony of customer delight. Let the BPMN framework be your guide in transforming the ordinary into the extraordinary in the world of burger culinary experiences. Welcome to the stage where technology meets taste, and efficiency sizzles in every carefully orchestrated step of the process.

Process

Let's elaborate on each subprocess in a more detailed and narrative format:

1.Hungry for Good Burger:

The order process is initiated when a customer, driven by the desire for a delicious burger, enters the restaurant or places an order through various channels.

2.Choose a Burger:

Upon perusing the menu, the customer carefully selects their preferred burger, considering the array of options available.

3.Enter an Order:

The chosen burger and customer details are meticulously recorded by the restaurant staff, marking the beginning of the order fulfillment process.

4.Request Payment:

With the order details in place, the system prompts the customer to proceed with the payment for the selected burger.

5.Choose Payment Type:

Customers are given the flexibility to choose their preferred payment method, whether it be a quick and secure card transaction or the classic exchange of cash.

6. Pay with Card:

In the case of card transactions, the system securely processes the payment, ensuring a smooth and efficient financial transaction.

7. Pay with Cash:

For customers opting to pay with cash, the traditional transaction is handled with care, and the funds are duly received.

8. Store Money in the Cash Drawer:

Cash received is securely stored in the cash drawer, maintaining an organized and controlled financial process for cash transactions.

9. Activate Payment Terminal (POS):

Payment terminals are activated, ready to facilitate card transactions swiftly and securely.

10. Pass the Bill to Customer:

The order details, along with the total amount to be paid, are presented to the customer in the form of a bill, initiating transparency in the transaction.

11. Bill with an order number (Message):

Each bill is uniquely tagged with an order number, creating a seamless reference point for tracking and communication purposes.

12. Grill a Burger:

The culinary journey commences as the kitchen staff expertly grills the selected burger, infusing it with the desired flavors.

13. Turn the Burger Over:

In the meticulous grilling process, the burger is gracefully flipped, ensuring an even and perfect cooking experience.

14. Place Meat to Bun and Complete by Recipe:

Following the recipe guidelines, the individual components of the burger are meticulously assembled, creating a harmonious blend of flavors and textures.

15. Pack the Burger to Paper:

The completed burger, now a culinary masterpiece, is carefully packed in paper, ready for the final stage of the journey.

16. Notify the Order Complete:

The system signals the completion of the order, setting the stage for the final steps in the process.

17.Order Completion Notification (Event):

An event notification is triggered, providing a real-time update on the status of the order, ensuring a smooth transition to the customer service phase.

18.Ask for Burger:

Staff approach the customer, confirming their order and ensuring a personalized touch in the service experience.

19.Check Order Number on Customer Bill:

A meticulous verification process takes place as the staff checks the order number on the customer's bill, ensuring accuracy in order fulfillment.

20.Hand Over the Package:

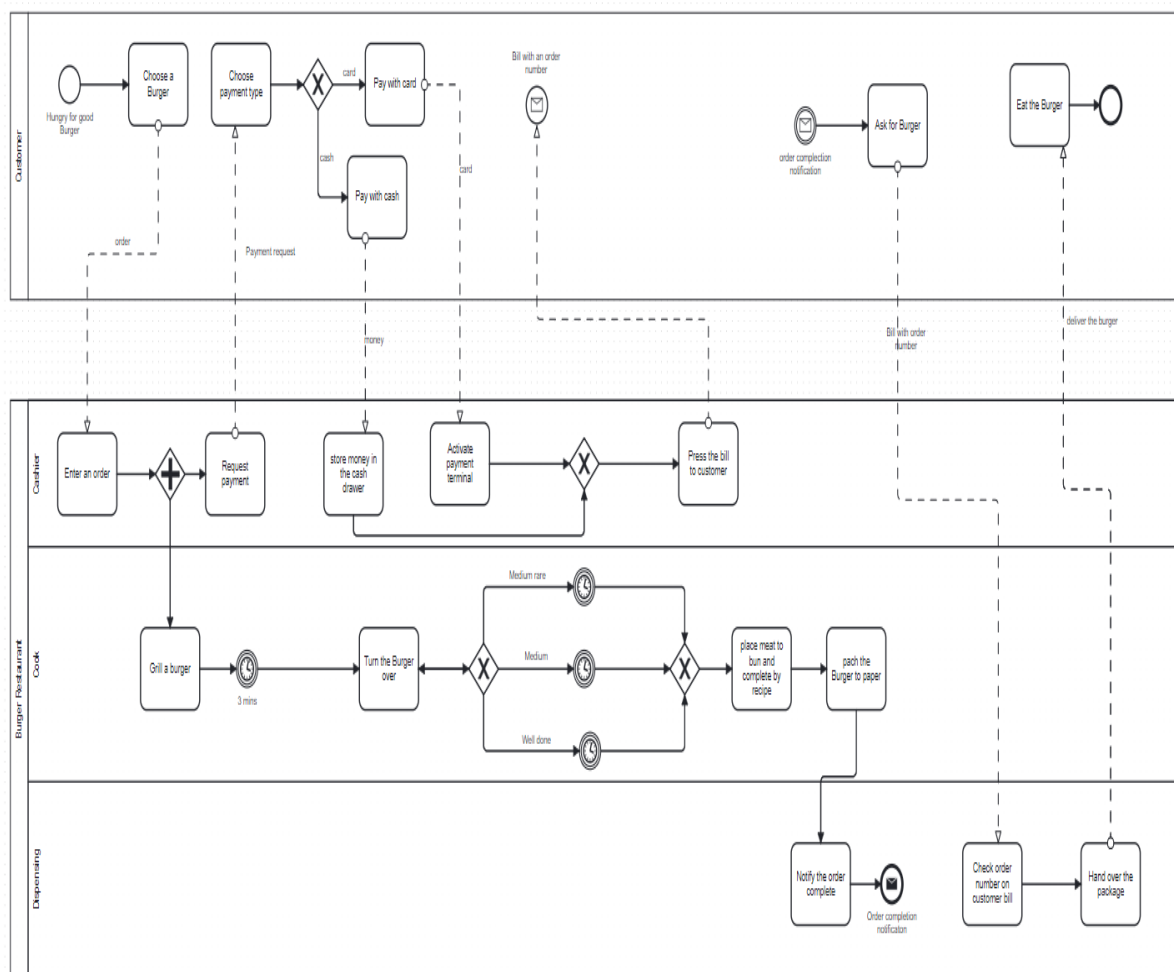
With all checks completed, the carefully packaged burger is handed over to the customer, marking the culmination of the order fulfillment process.

21.Eat the Burger:

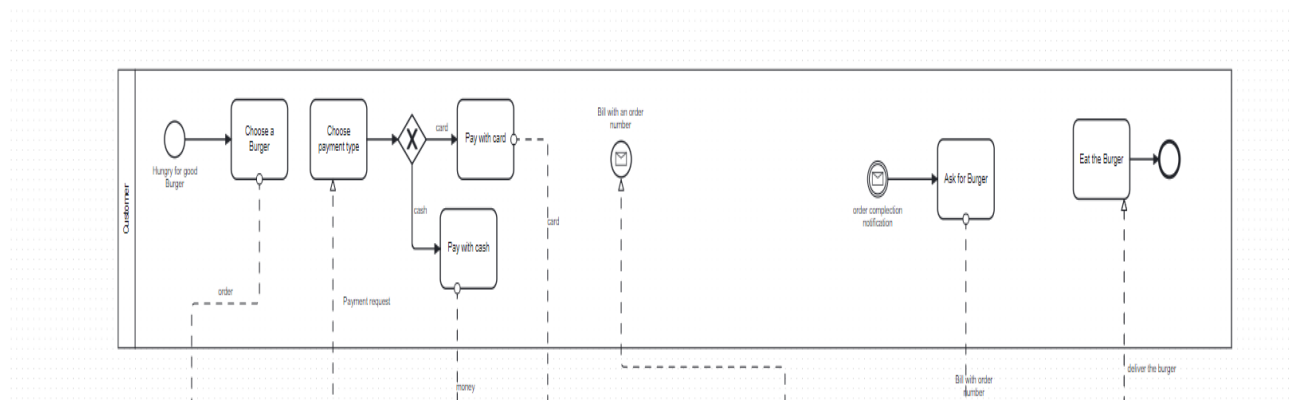
The customer, now holding the eagerly awaited burger, embarks on the final stage of the journey, savoring the flavors and enjoying the delightful culinary creation.

Business Processes Flow BPMN diagram

We have two pools(customer, burger restaurant)



The first pool is customer :

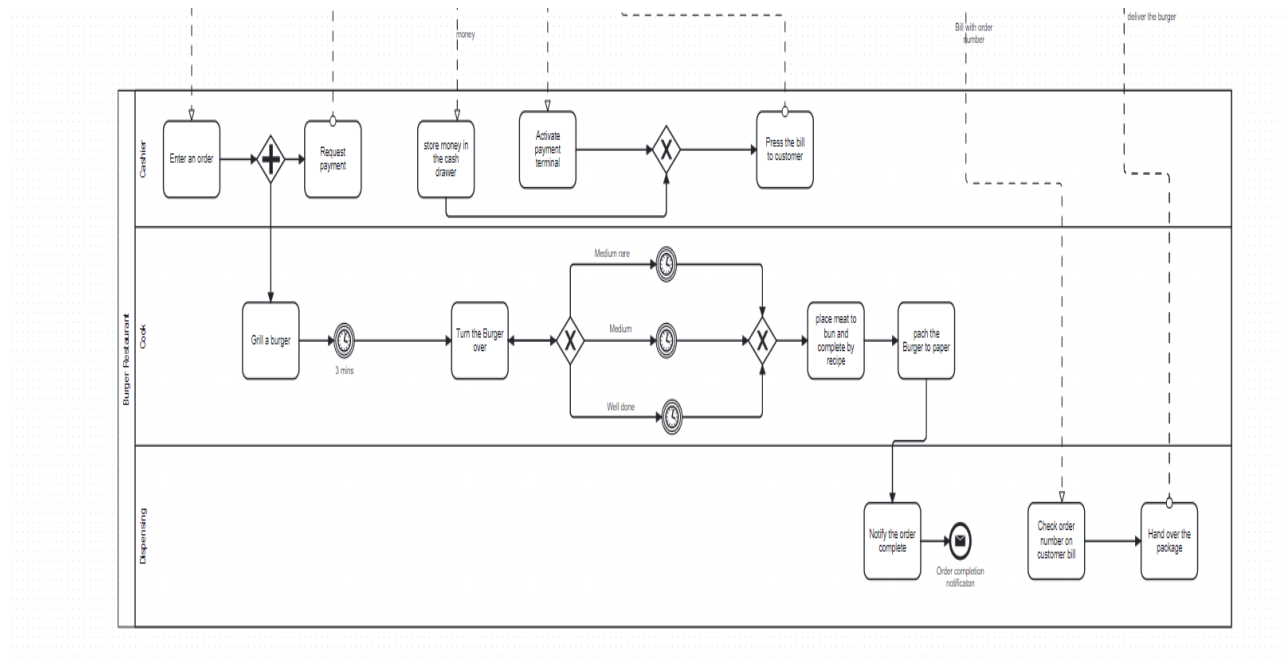


The second pool is burger restaurant :

It has three lanes: 1. Cashier.

2. Cook.

3. Dispensing.



Value Model

Value Model for Burger Restaurant Order Processing:

E3value Model:

Customer Pool:

Actor: Customer

Value Objects:

Order

Payment

Value Interfaces:

Sends "Order" to Burger Restaurant (Take Order).

Sends "Payment" to Burger Restaurant (Process Payment).

Value Propositions:

Customer gets their desired burger.

Burger Restaurant Pool:

Cashier Lane:

Actor: Cashier

Value Objects:

Order

Payment

Value Ports:

Input Port: Receives "Order" from Customer.

Input Port: Receives "Payment" from Customer.

Value Activities:

Take Order

Process Payment

Cook Lane:

Actor: Cook

Value Objects:

Order

Burger

Value Ports:

Input Port: Receives "Order" from Cashier.

Output Port: Sends "Burger" to Dispensing.

Value Activities:

Grill a Burger

Turn the Burger Over

Place Meat to Bun and Complete by Recipe

Dispensing Lane:

Actor: Dispensing

Value Objects:

Burger

Value Ports:

Input Port: Receives "Burger" from Cook.

Output Port: Sends "Burger" to Customer.

Value Activities:

Pack the Burger to Paper

Notify the Order Complete

Ask for Burger

Hand Over the Package

Value Transactions:

Transaction 1:

From: Customer

To: Burger Restaurant (Cashier)

Value Objects: Order

Transaction 2:

From: Customer

To: Burger Restaurant (Cashier)

Value Objects: Payment

Transaction 3:

From: Burger Restaurant (Cashier)

To: Burger Restaurant (Cook)

Value Objects: Order

Transaction 4:

From: Burger Restaurant (Cook)

To: Burger Restaurant (Dispensing)

Value Objects: Burger

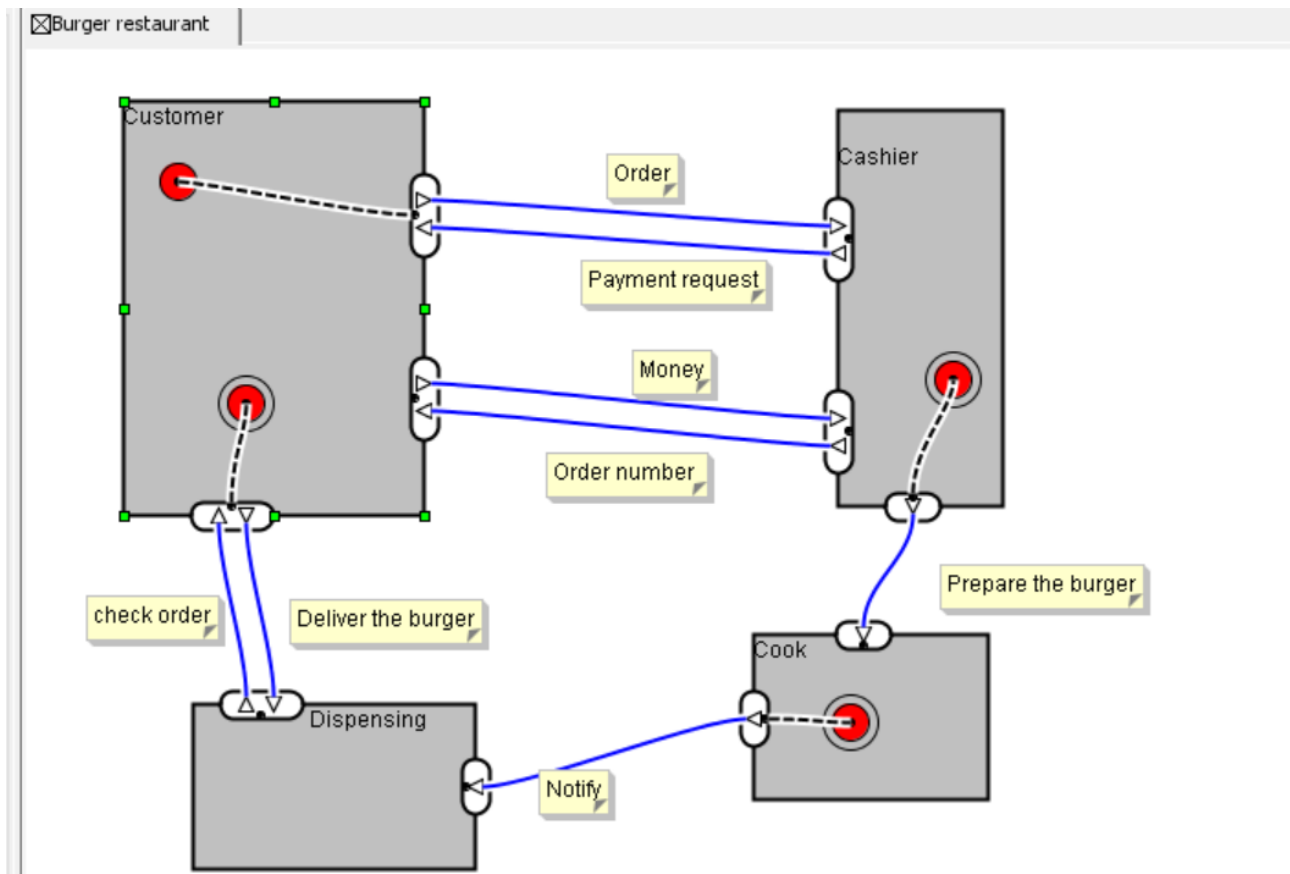
Transaction 5:

From: Burger Restaurant (Dispensing)

To: Customer

Value Objects: Burger

Here is an illustrative representation of the E3value model for your Burger Restaurant Order Processing scenario:



Business evaluation

Critical Success Factors (CSFs):

1.Customer Satisfaction:

CSF: The level of satisfaction among customers.

KGI: Customer Feedback Score

KPI: Percentage of positive customer reviews and ratings on platforms like online review sites.

2.Operational Efficiency:

CSF: Efficient order processing and burger preparation.

KGI: Order Processing Time

KPI: Average time taken from order placement to burger delivery.

3. Quality of Service:

CSF: Providing high-quality burgers and excellent service.

KGI: Burger Quality Rating

KPI: Percentage of orders meeting or exceeding customer expectations.

4. Financial Performance:

CSF: Achieving profitability and revenue targets.

KGI: Revenue Growth Rate

KPI: Monthly and annual revenue compared to targets.

5. Employee Satisfaction and Performance:

CSF: Motivated and well-trained staff.

KGI: Employee Satisfaction Index

KPI: Employee turnover rate and training completion rates.

6. Innovation and Menu Diversity:

CSF: Offering a diverse and innovative menu.

KGI: New Menu Item Adoption Rate

KPI: Percentage of sales from newly introduced menu items.

Key Goal Indicators (KGIs):

1. Customer Loyalty:

KGI: Repeat Customer Rate

KPI: Percentage of customers who make repeat visits within a specified

period.

2. Market Share Growth:

KGI: Market Share Percentage

KPI: The restaurant's share of the local burger market compared to competitors.

3. Brand Recognition:

KGI: Brand Awareness Index

KPI: Social media mentions, brand searches, and customer recall surveys.

4. Employee Engagement:

KGI: Employee Engagement Score

KPI: Survey-based measurements of employee satisfaction and engagement.

5. Sustainability Practices:

KGI: Sustainability Adoption Rate

KPI: Percentage of packaging materials that are eco-friendly, energy efficiency measures implemented, and waste reduction initiatives.

Key Performance Indicators (KPIs) in Practice:

1. Order Accuracy:

KPI: Percentage of orders delivered without errors.

Measurement: Regular auditing of order accuracy through customer feedback and internal checks.

2. Table Turnover Rate:

KPI: Average time a table remains occupied.

Measurement: Analysis of the time taken for customers to finish their meals and leave, optimizing table turnover for higher revenue.

3. Cost of Goods Sold (COGS):

KPI: Percentage of revenue spent on ingredients and materials.

Measurement: Regular tracking and analysis of ingredient costs against revenue.

4. Social Media Engagement:

KPI: Likes, shares, comments, and overall engagement on social media platforms.

Measurement: Monthly tracking of social media metrics and customer interactions.

5. Health and Safety Compliance:

KPI: Adherence to health and safety standards.

Measurement: Regular inspections, employee training records, and incident reports.

6. Marketing ROI:

KPI: Return on Investment from marketing campaigns.

Measurement: Tracking the impact of marketing efforts on sales and customer acquisition.

conclusion

In conclusion, the Burger Restaurant exemplifies the harmonious integration of operational excellence, customer-centric practices, and a commitment to continuous improvement. Our exploration of business processes through BPMN and E3value modeling has revealed a holistic

perspective on how we create, deliver, and capture the value.

The identification of Critical Success Factors (CSFs) has enabled us to pinpoint key areas that directly influence our success, ranging from customer satisfaction to operational efficiency. Aligned with these factors, our carefully selected Key Performance Indicators (KPIs) and Key Goal Indicators (KGIs) serve as compass points, guiding us toward sustainable growth, customer loyalty, and financial resilience.