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Set the Right Integration Foundation for Digital Transformation

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May 1, 2019

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Digital transformation ➜
  prepare for an unpredictable future

Digital business design ➜
  integration to create sustainable business agility

Agile-plus-architecture ➜
  collaboration & practice to build an open future

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Digital transformation ➜
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 *collaboration & practice to build an open future*

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Digital transformation is the new norm

When told. . .

- "A digital transformation is a business transformation that uses technology to **continually improve** customer outcomes and operational agility. The digital transformations go beyond creating digital touchpoints and **revitalizes the ways the business creates and captures value** for customers."
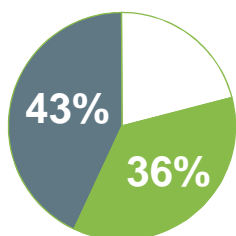
. . .43% of decision makers that say:

- We are currently undergoing a digital transformation
- We completed our digital transformation in the past 12 months

. . .36% of decision makers that say:

- We are always in a state of digital transformation

43%

36%

Base: Services decision-makers at enterprises globally, n=2,570
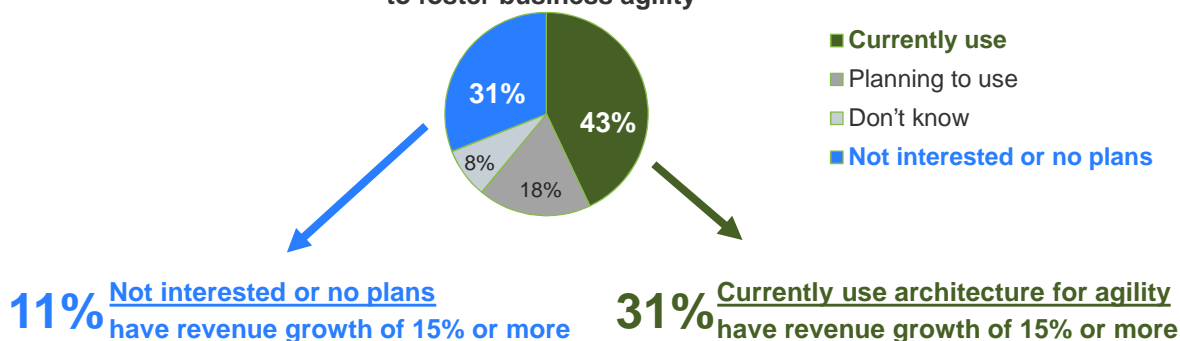Source: Forrester Business Technographics® Business and Technology Services Survey, 2018

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Architecture for agility correlates with higher growth

Which of the following architecture styles does your organization currently use or plan to use?

**Architecture strategy and design
to foster business agility**

31%

43%

8%

18%

■ **Currently use**
■ Planning to use
■ Don't know
■ **Not interested or no plans**

11% **Not interested or no plans**
have revenue growth of 15% or more

31% **Currently use architecture for agility**
have revenue growth of 15% or more

Base: Developers who work full time, n=3,111
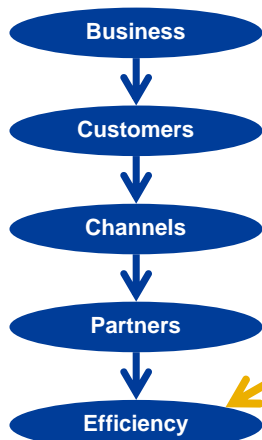Source: Forrester's Business Technographics® Business and Technology Developer Survey 2018

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Open business: APIs reframe business strategy

Traditional business

- Business
- Customers
- Channels
- Partners
- Efficiency

Open business

- Competencies
- Ecosystems
- Relationships
- Connections
- Leverage
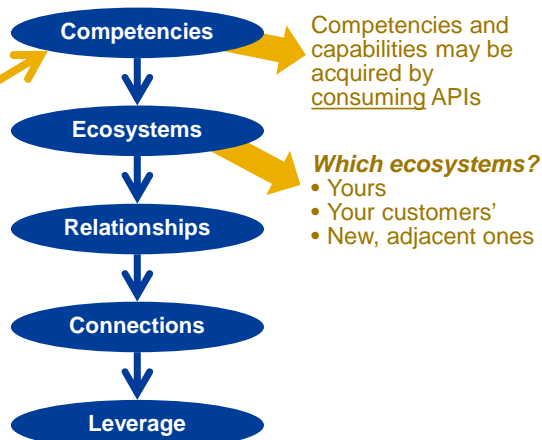
Where business design begins for:
- **Business agility**
- **External integration**

Competencies and capabilities may be acquired by _consuming_ APIs

Which ecosystems?
- Yours
- Your customers'
- New, adjacent ones

Source: "How APIs Reframe Business Strategy" Forrester report

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Digital creates pressure for continuous change

› **Digital disruption:**
  - Startups steal customers; old firms get Amazoned

› **Digital transformation:**
  - Preparing to dish out your own disruption

Great billiards

Make the crazy four-bank shot into the side pocket – and drop an extra ball in the corner

World-class billiards

Do that *and* leave the cue ball setup for the next shot

Reference: "APIs Underpin a Digital Business Platform" Forrester report

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Digital transformation ➔
prepare for an unpredictable future

Digital business design ➔
integration to create sustainable business agility

Agile-plus-architecture ➔
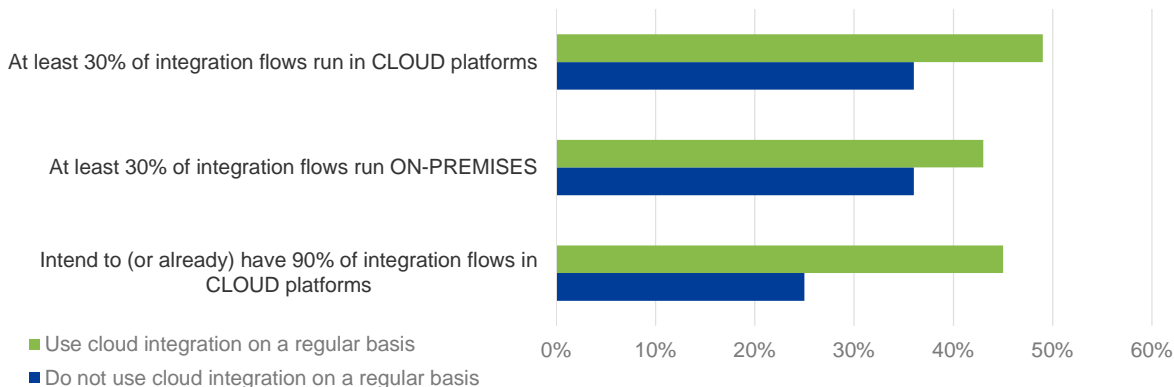*collaboration & practice to build an open future*

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Cloud integration is taking hold, but not taking over

Where integration flows run for developers that do / do not regularly use cloud integration services
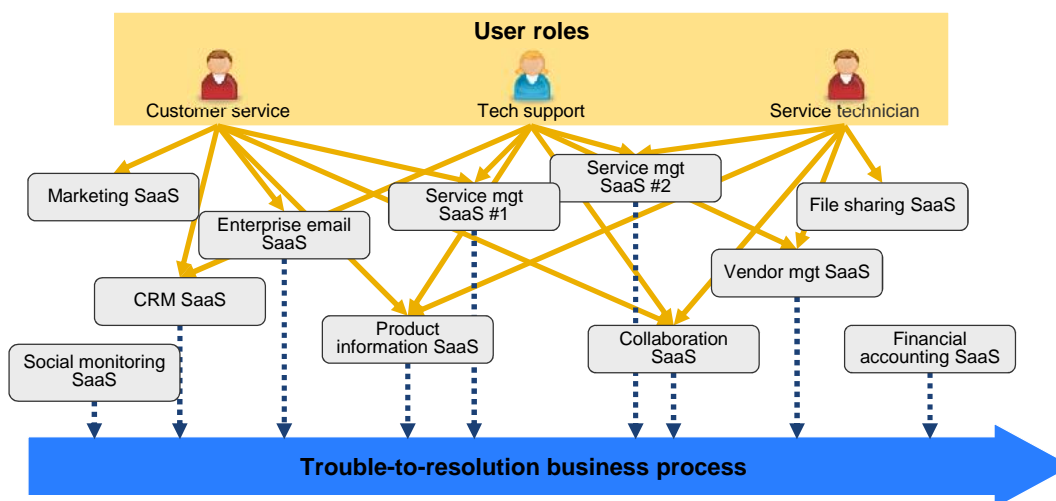

Base: Global developers who have (n=267) or have not (n=1370) developed with cloud-based integration services on a regular basis
Source: Forrester Data Global Business Technographics® Developer Survey, 2018

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SaaS silos fracture UX and business processes

Source: "Options For Integrating SaaS Applications" Forrester report

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Typical cloud integration pattern: Techie
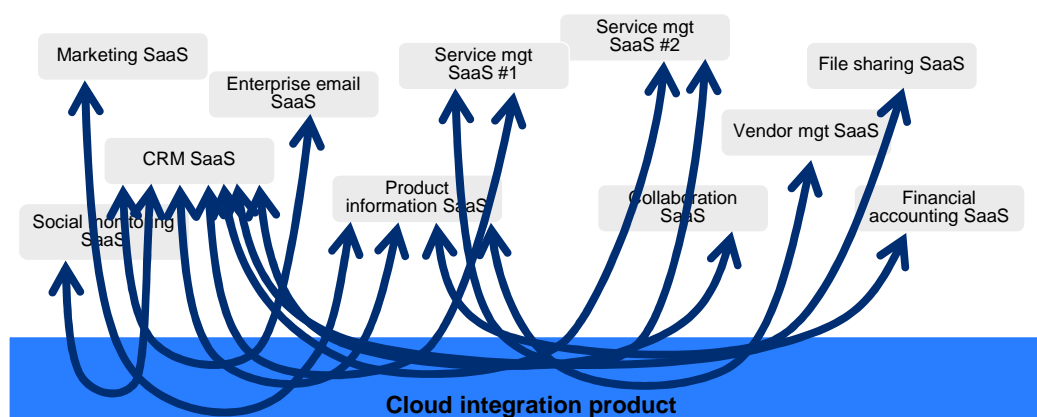
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A continual explosion in the tech landscape

Technology

RPA
Containers
AI-ML
Kubernetes
Analytics-Big Data
Social
Cloud
IoT
Mobile
Virtualization
AJAX
RFID
Biz rules
Events
BI
BPM
ETL
WS*
EAI
Web–Internet
App servers
PCs
Minicomputers
Mainframes

Architecture

Cloud-native
Microservices
Map-reduce
Pipelines
APIs
Model-based Infra
CMDB
DDD
SOA
Data warehouse
MDA
N-tier
Objects
Component-based
Client–server
Distributed computing
Monolithic, structured
Monolithic, spaghetti
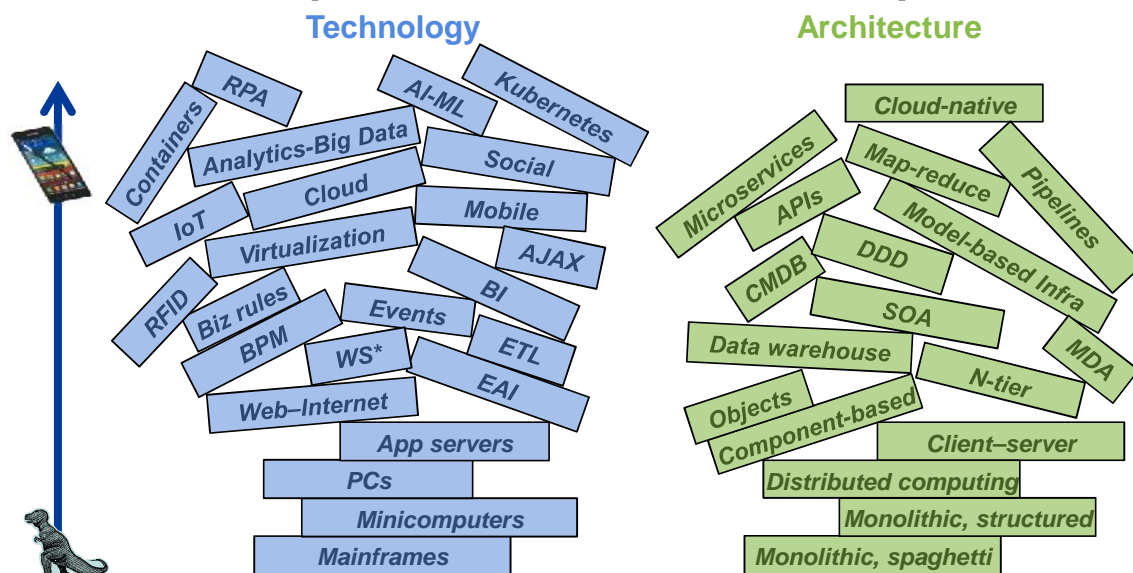
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Your tech landscape is London; you need New York

Image sources: wikimedia.org, mapmoose.com

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So, contain the complexity behind business design

Logically speaking, treat a piece of London as if it were designed like New York City
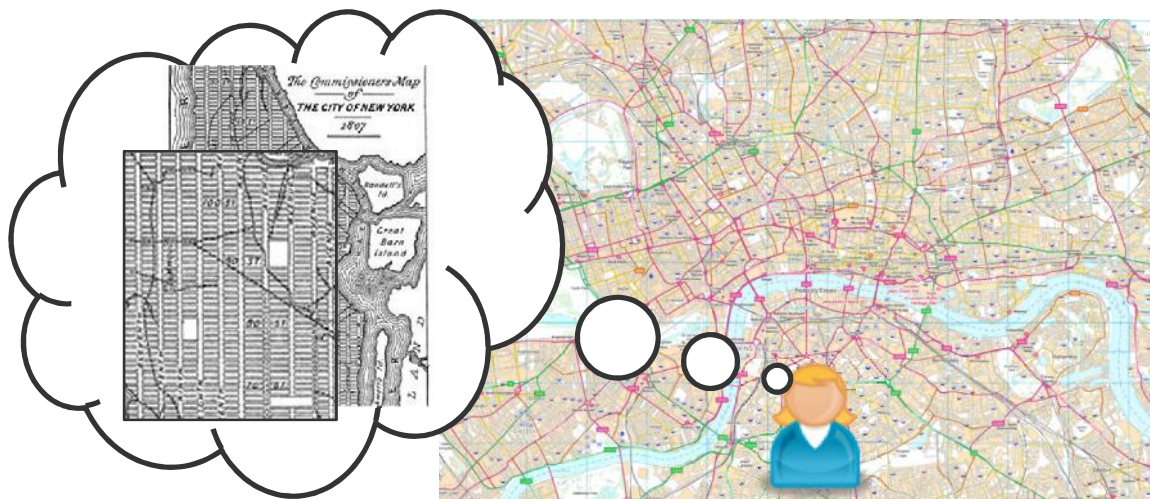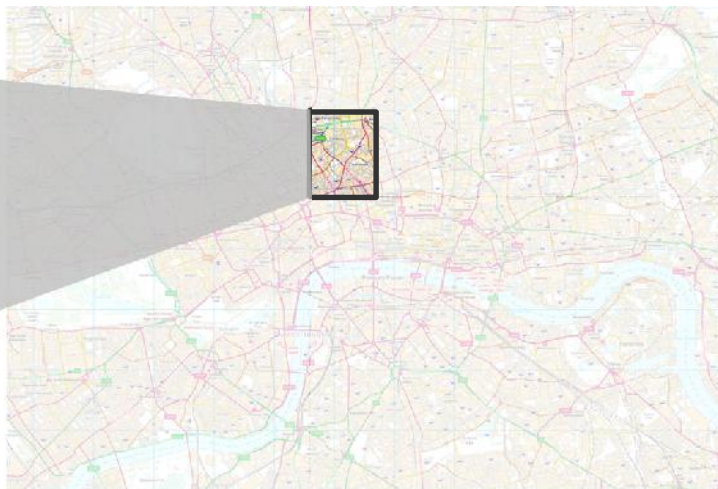
Image sources: wikimedia.org, mapmoose.com

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Business building blocks enable agility

APIs embody complete business transactions

APIs as software artifacts are business building blocks

Integration implements business designs

Business design is insulated from silos

Business transaction — SOA-API business service: SubmitOrder

Integration technologies

Existing applications: Customer care 1, Order entry, Shop floor, Customer care 2, Inventory, Supply chain, Accounting, Production, Logistics

Reference: November 2012 "Digital Business Design Is The New Integration" Forrester report

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Design a modular digital business
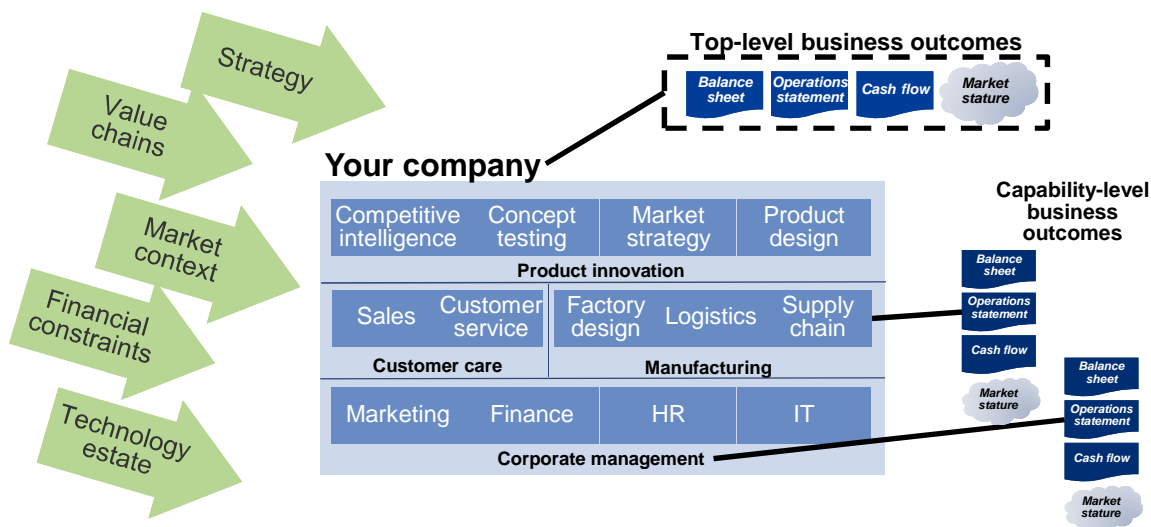
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Then target a business implementation

Source: December 2010, "Business Capability Architecture: Use Business Outcomes To Drive Technology Strategy" Forrester report

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APIs are the foundation of digital business design

Digital business

Product innovation

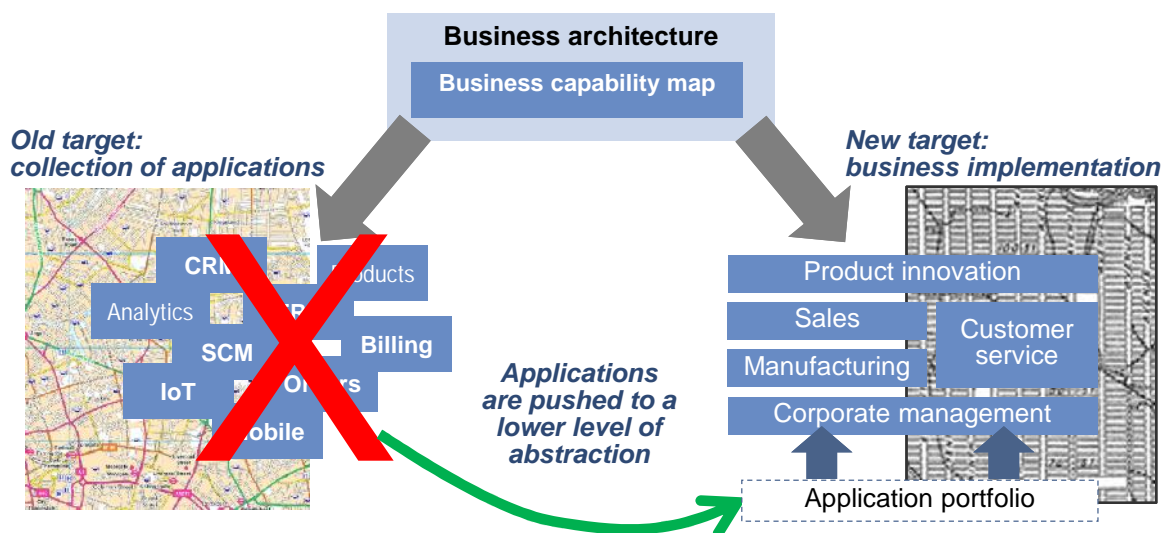Sales

Customer service

Manufacturing

Corporate management

Customer service

digital business capability

Digital business design...

| User roles |
| Business processes |
| Business transactions & queries |
| Contextual business data views |
| Insight & optimization |
| Business relationships |
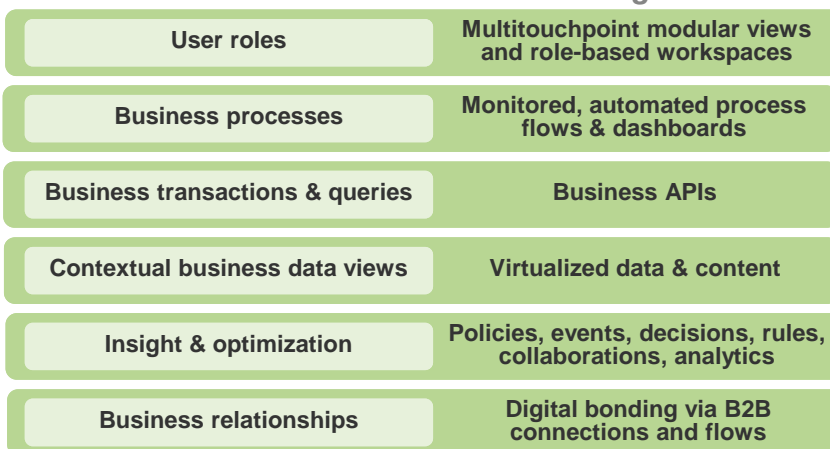
...embodied as business building blocks

| **Multitouchpoint modular views and role-based workspaces** |
| **Monitored, automated process flows & dashboards** |
| **Business APIs** |
| **Virtualized data & content** |
| **Policies, events, decisions, rules, collaborations, analytics** |
| **Digital bonding via B2B connections and flows** |

Source: "Digital Business Design Is The New Integration" Forrester report

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Multiple integration styles deliver business design

Business process flows

APIs

EDI

Data mapping

Application integration

Data virtualization

Robotic process automation

Customer service

Containers & microservices

Business activity monitoring

B2B integration

Eventing

File transfer
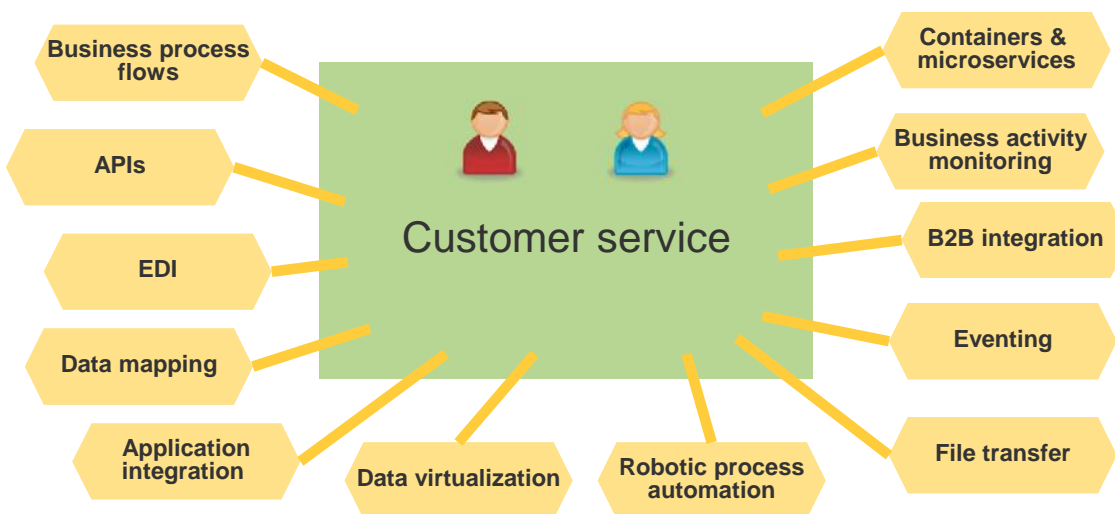
Reference: "Digital Business Design Is The New Integration" Forrester report

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A continuum of very different integration approaches
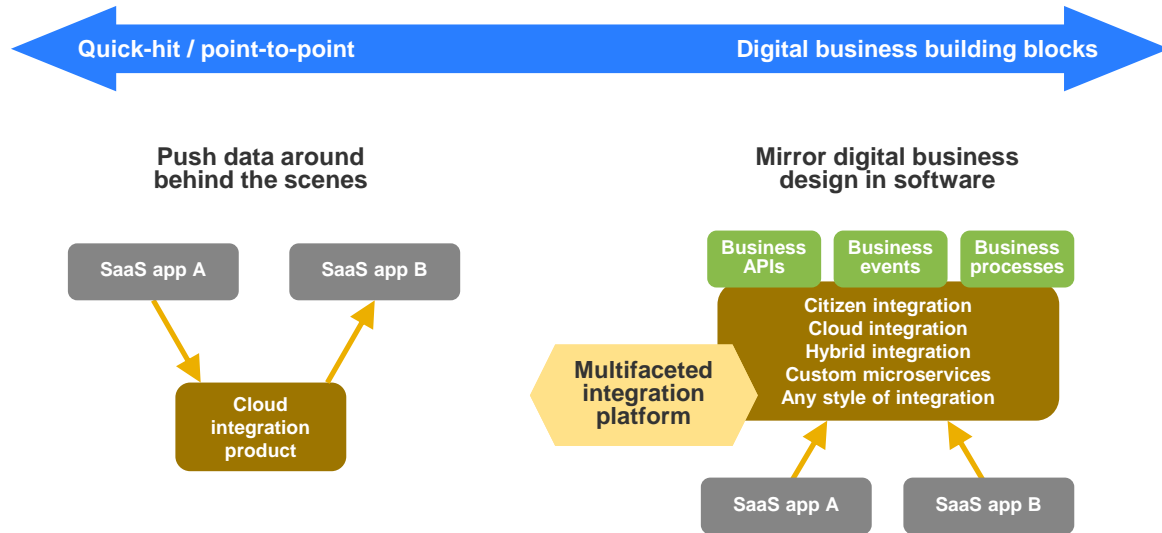
Quick-hit / point-to-point

Digital business building blocks

Push data around
behind the scenes

Mirror digital business
design in software

SaaS app A

SaaS app B

Business
APIs

Business
events

Business
processes

Cloud
integration
product

Multifaceted
integration
platform

Citizen integration
Cloud integration
Hybrid integration
Custom microservices
Any style of integration

SaaS app A

SaaS app B

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collaboration & practice to build an open future

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Digital business needs sustainable business agility

› Sustainable business agility:
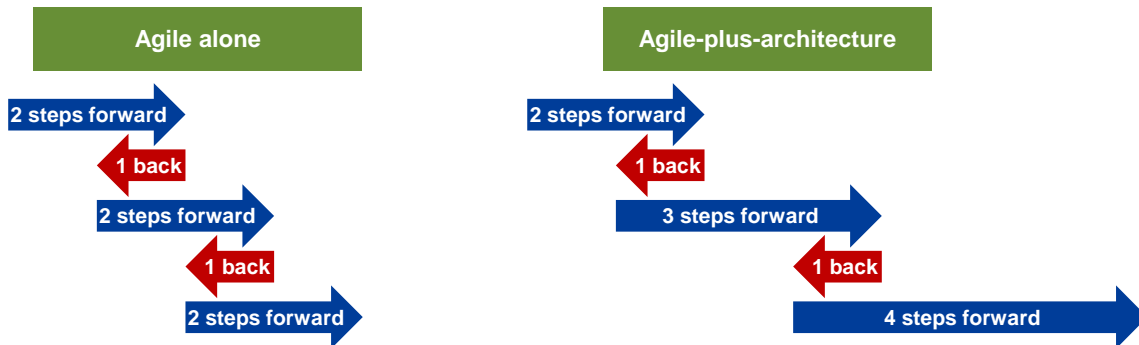- • Continually making one business change after another, large or small...
- • ...in ways that make future changes easier...
- • ...or at least in ways that do not adversely affect the ability to make future changes.

Agile alone

2 steps forward
1 back
2 steps forward
1 back
2 steps forward

Agile-plus-architecture

2 steps forward
1 back
3 steps forward
1 back
4 steps forward

Source: "Architect For The Next Digital Decade" Forrester report

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Integration is a design center for digital business

Do less of this

Do more of this

Digital business design

Old-style integration

Integration is
quick-hit and
point-to-point

Integration creates
business building
blocks
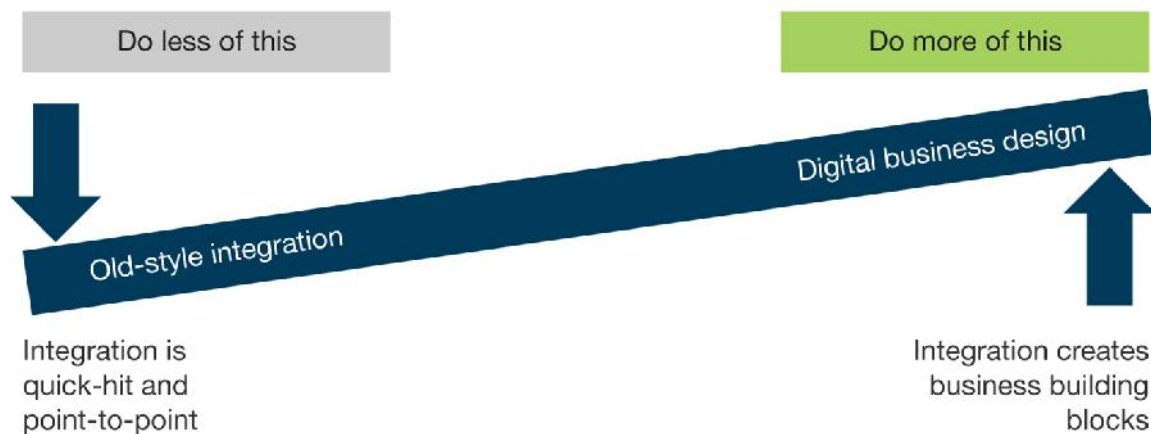
Source: "A Developer's Guide To Forrester's Strategies For Integration And Digital Business Platforms" Forrester report.

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Patterns to hide legacy with business design

Customer service

Direct access to legacy UI

Event-based connections to services & processes

UI subsumed in a role-based workbench

Complex event processing

Legacy application Custom or off-the-shelf

User interface

Business logic subsumed within business APIs
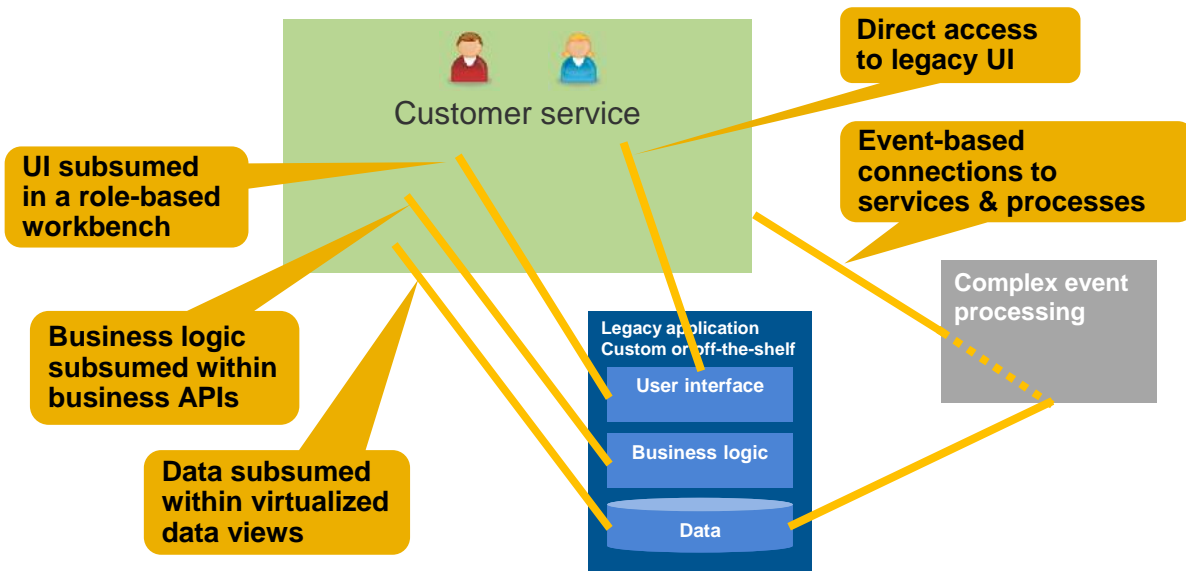
Business logic

Data subsumed within virtualized data views

Data

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Developer-architect collaboration is a critical enabler
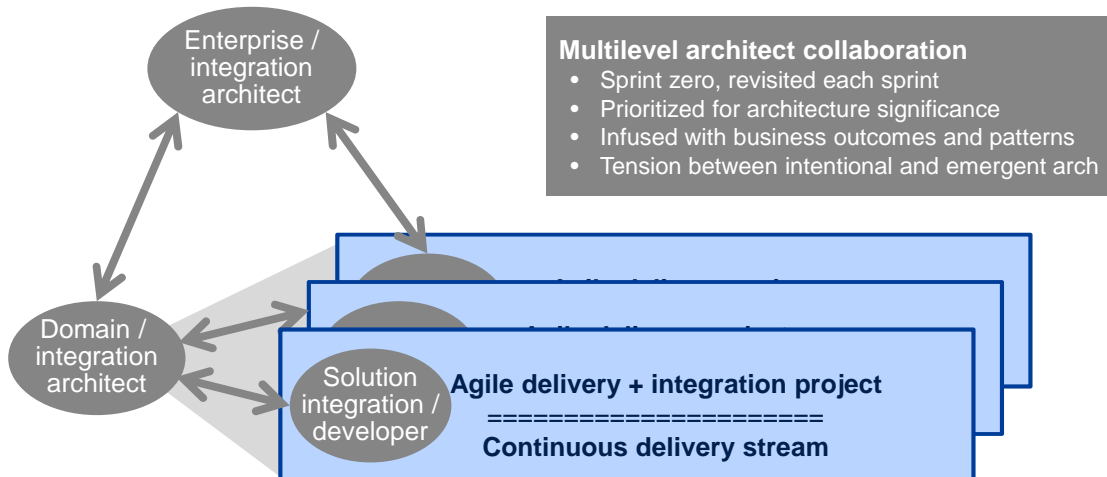
Enterprise / integration architect

Multilevel architect collaboration
- Sprint zero, revisited each sprint
- Prioritized for architecture significance
- Infused with business outcomes and patterns
- Tension between intentional and emergent arch

Domain / integration architect

Solution integration / developer

Agile delivery + integration project
======================
Continuous delivery stream

Source: "Best Practices For Agile-Plus-Architecture" Forrester report

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Architecture management and technology selection
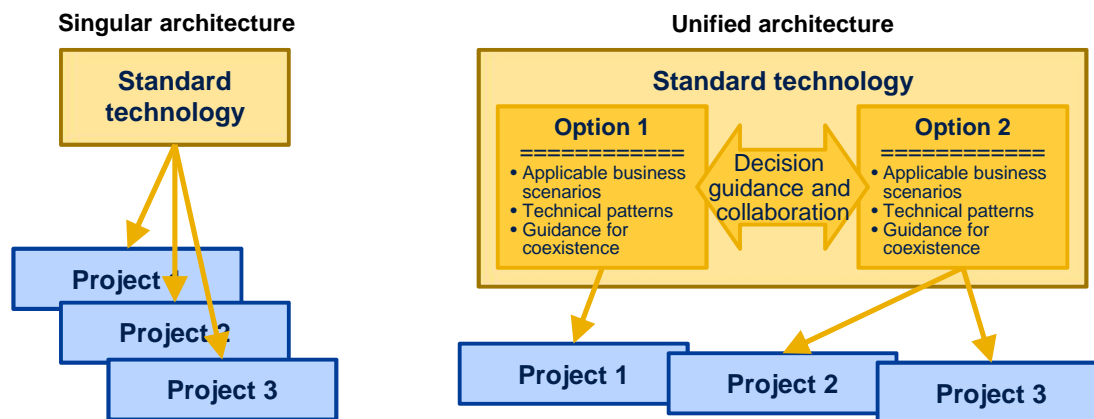
Do unified, not singular architecture

Singular architecture

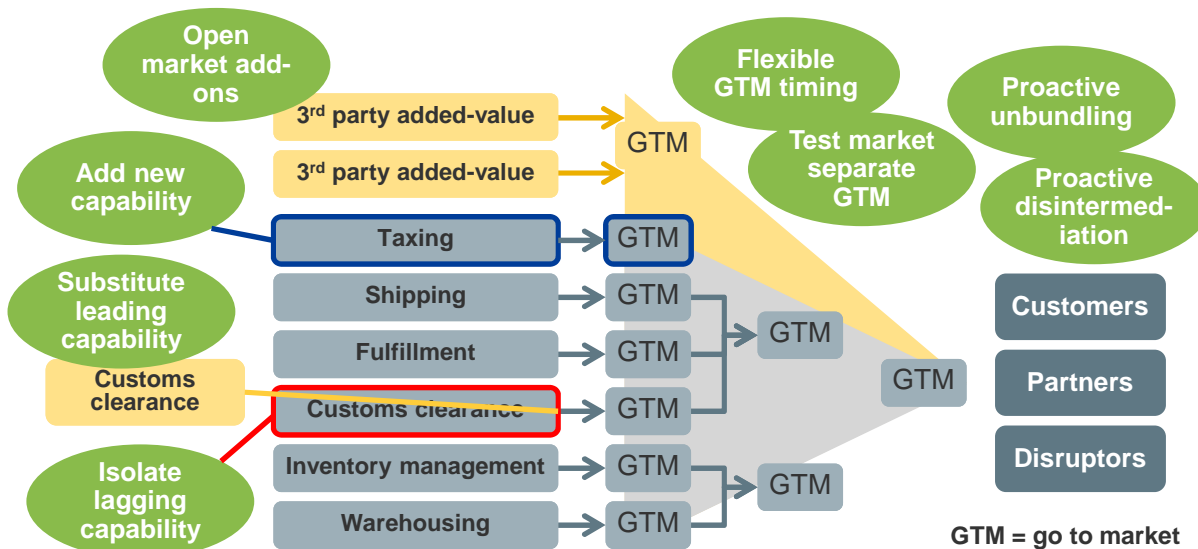Standard technology

Project 1
Project 2
Project 3

Unified architecture

Standard technology

Option 1
============
• Applicable business scenarios
• Technical patterns
• Guidance for coexistence

Decision guidance and collaboration

Option 2
============
• Applicable business scenarios
• Technical patterns
• Guidance for coexistence

Project 1   Project 2   Project 3

Reference: "Best Practices For Agile-Plus-Architecture" Forrester report

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Open business: strategy for each capability; integrated GTM

Open market add-ons

Add new capability

Substitute leading capability

Customs clearance

Isolate lagging capability

3rd party added-value
3rd party added-value
GTM

Taxing → GTM
Shipping → GTM
Fulfillment → GTM
Customs clearance → GTM
Inventory management → GTM
Warehousing → GTM

GTM
GTM
GTM

Flexible GTM timing
Test market separate GTM
Proactive unbundling
Proactive disintermediation

Customers
Partners
Disruptors

GTM = go to market

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FORRESTER®

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Thank you

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