
# Welcome to the Midwest Architecture Community Collaboration

## 2019 Workshop

## Aligning Business, Innovation and Architecture Strategy

# MACC WORKSHOP AGENDA

## Morning

- Workshop Opening Remarks and Overview
- Introduction – Strategy & Alignment
- Business and Innovation
- Innovation Strategy
- Tinkleman History and Lab 1
- Business Architecture Artifacts
- Architecture Strategy

## Afternoon

- Architecture Roles and Processes
- Innovation and Architecture
- Agile Architecture
- Tinkleman Architecture Lab 2
- Human Capital Management
- Organizational Structure and Culture Change
- Architecture Practice



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# MACC OVERVIEW

The Midwest Architecture Community Collaboration's (MACC) purpose is to bring all domains of architecture together to share information and techniques of interest to all of us. It is our shared belief that through collaboration, we can better understand and promote the significance of architecture to business success.



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# MACC WORKSHOP PRESENTERS

| | |
|---|---|
| Judy Pennington | She has a foundation in technology and over the years has focused at the intersection of people and technology. She has "been there, done that" experience in designing and developing streamlined IT organizations and operations. |
| Troy Nelson | His diverse background in systems development, consulting, teaching and technology leadership influence his approach to leading change through pragmatic application of business architecture tools and thinking. |
| David Ching | He has brought a top down, business perspective to architecture to improve the practice of architecture. An Engineer by education, he has brought a systems perspective to the development of software products for different markets. |
| Johan Wettstrom | Has helped companies solve business and technical problem for 30 years. He has helped companies with architecture, processes, best practices and implementations. |
| Youssef Haddad | A thought leader with over 25 years in Information Technology with experience in areas such as leadership, management, enterprise architecture, software engineering, databases design, education and training. |

# MACC WORKSHOP GROUND RULES

- Ask questions and feel free to share your own experiences.
  - We do not have all the answers – but someone else in the room might
- Goal is to stay on task and time
  - Some questions or discussions we may defer to the end of the workshop if time allows
- Put cell phones on silent
  - We know there is a lot going on and you may need to be in contact with people back in the office
  - Be respectful of others and step outside of the room if you need to take a call



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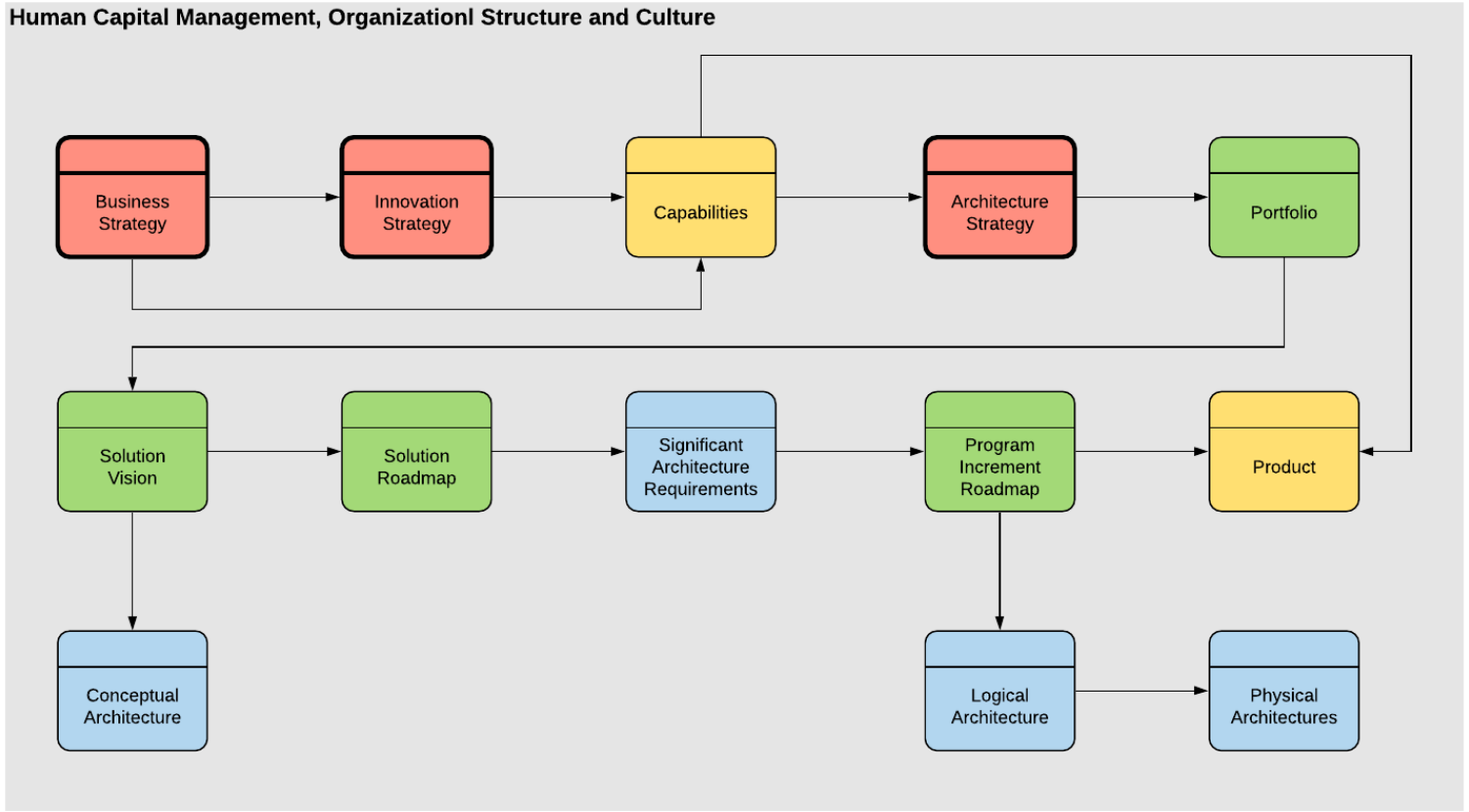
# WHAT WE ARE GOING TO ADDRESS

- Aligning business, innovation and architecture strategies
- Processes to realize this alignment
- Approaches to delivering value through aligned architectures

**Aligning Business and IT through Innovation and Architecture**



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# INTRODUCTION TO THE MORNING SESSION

- Strategy and Alignment and their importance in today's business environment[13]
- Innovation and its place in Strategic Alignment
- "10 Types of Innovation"
- Applying business architecture concepts

# INTRODUCTION: STRATEGY & ALIGNMENT

- Our definition of "Strategy" and three types of strategy
  - Strategy: "A plan of action designed to achieve a long-term or overall aim"*
    - Business Strategy[4] – A long-term plan created to reach a desired future state that includes the company's goals and objectives, the type of products/services to build, the customers to sell to and the markets served to make profits.
    - Innovation Strategy – A plan developed by a company to encourage advancements in technology or services, usually by investing money in research and development activities.
    - Architecture Strategy – A plan that is aligned with the business and innovation strategies of the organization resulting in a tangible purpose and measurable results through delivering new or improved capabilities.



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* https://www.lexico.com/en/definition/strategy

# INTRODUCTION: STRATEGY & ALIGNMENT

- What do we mean by "alignment", or specifically, "strategic alignment"?
  - **"Strategic alignment** is the process and the result of linking an organization's structure and resources with its strategy and business environment (regulatory, physical, etc.) Strategic alignment enables higher performance by optimizing the contributions of people, processes, and inputs to the realization of measurable objectives and, thus, minimizing waste and misdirection of effort and resources to unintended or unspecified purposes."
  - "Strategic alignment can also refer to a state in which a "company's business and product development strategies are aligned with its customers, users, and marketplace," leading to economic success."

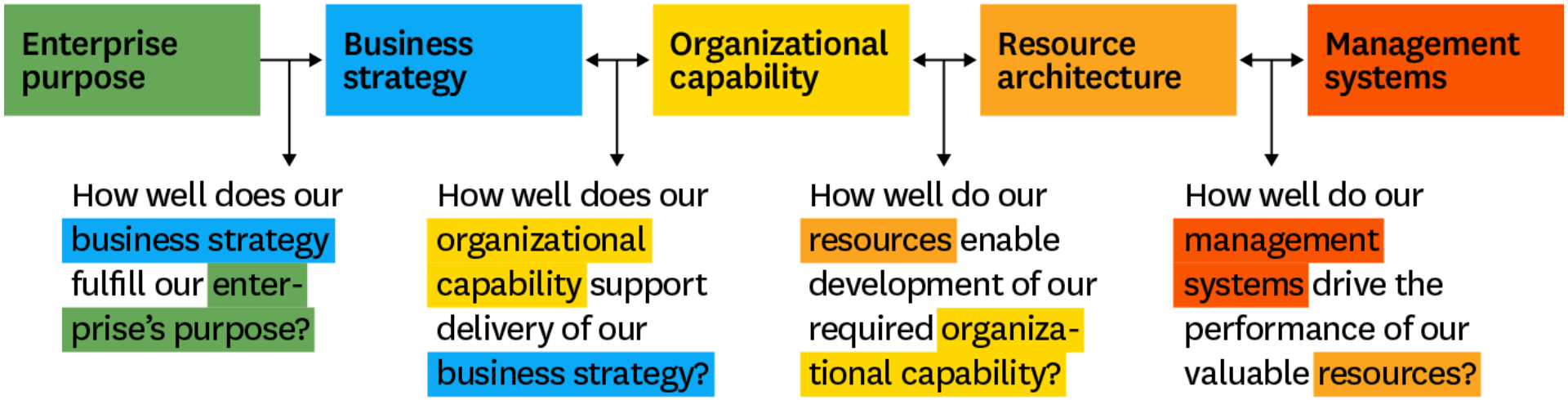
https://en.wikipedia.org/wiki/Strategic_alignment

- "Alignment like cars out of alignment, misaligned companies can develop serious problems. They are hard to steer, and they don't respond well to changes in direction. Even if it's clear where everyone thinks they're headed, the vehicle is unlikely to get them there." © Scaled Agile, Inc.[12]

# INTRODUCTION: STRATEGY & ALIGNMENT

**The Interdependent Components That Make Up a Strategically Aligned Enterprise**

The value chain is only as strong as its weakest link.




SOURCE JONATHAN TREVOR AND BARRY VARCOE [1]

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# INTRODUCTION: STRATEGY & ALIGNMENT

- What is the value of alignment?
  - Focus energy in the right areas at the right times
  - Reduce or abolish workplace redundancies
  - Eliminate conflicting priorities
  - Increase team-member coordination, communication, and buy-in
  - Clarify the capabilities and competitive advantages of the organization
  - Provide structure and clarity of purpose for employees
  - Empower all team members to shape the future of the organization
  - Support market maneuverability, a must in a rapidly changing global economy

Center for Management & Organization Effectiveness

https://cmoe.com/strategic-alignment/



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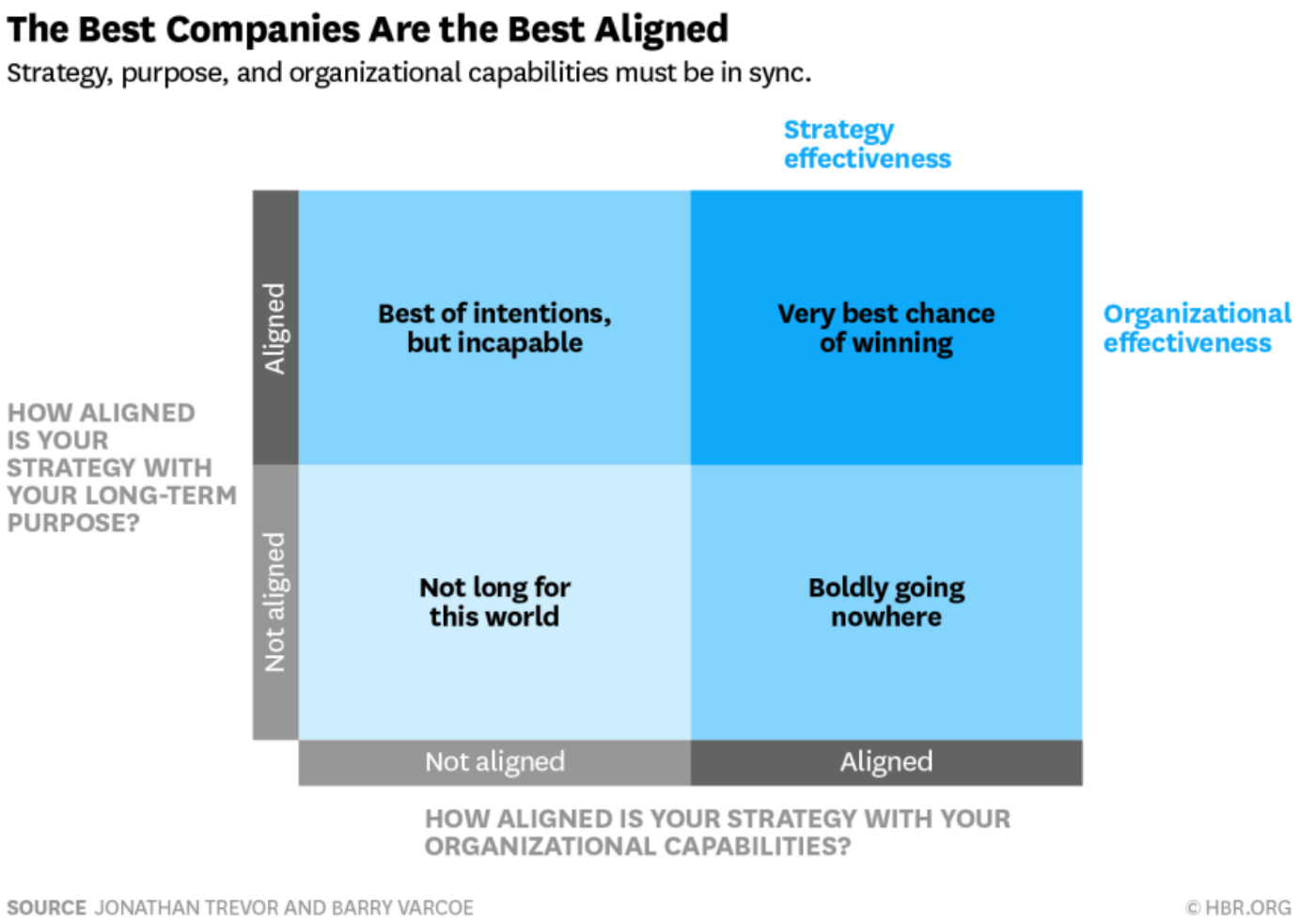
# INTRODUCTION: STRATEGY & ALIGNMENT




https://hbr.org/2016/05/a-simple-way-to-test-your-companys-strategic-alignment



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# INNOVATION

"Innovation is the creation of a viable new offering"[6]



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# INNOVATION AND STRATEGY

- Why should a business innovate?
  - In an era of digital business and rapid technology change, no company can ignore the imperative to innovate as not doing so results in the likely failure to lose business[5]

# WHAT IS DRIVING THE EMPHASIS ON INNOVATION

- Sales growth[5] (69%) is the top metric along with
  - Customer satisfaction ratings – 43%
  - New ideas in the pipeline – 40%
  - Market share – 36%
  - Number of products in the pipeline – 31%
  - Net value of innovation portfolio – 28%
  - Time to market – 24%

# ALIGNING INNOVATION

- Innovation Improvement Efforts[2]
  - Without an innovation strategy, innovation improvement efforts can become a grab bag of much touted best practices such as
    - Dividing R&D into decentralized autonomous teams (silo building)
    - Spawning internal entrepreneurial ventures
    - Setting up corporate venture-capital arms
    - Pursuing external alliances
    - Embracing open innovation and crowdsourcing
    - Collaborating with customers
    - Implementing rapid prototyping
  - These are valid ways to address innovation but not for the sake only of innovation
  - Without an innovation strategy, different parts of an organization can easily pursue conflicting priorities even if there is a clear business strategy
  - Companies are struggling with clearly aligning their innovation efforts with their business strategy which should be the driver for focusing innovation efforts

# BUSINESS AND INNOVATION

- Innovation Categories[3]
  - **Incremental** - typically involves improving existing products or services that are closely tied to the company's core business
  - **Adjacent** - involves expanding into neighboring markets and appealing to new customers
  - **Transformational** - also known as disruptive innovation, results in the creation of new business models for new markets with potentially new products

- These categories are a way of understanding risk and investment in each area

# INNOVATION STRATEGY

- How does a business drive an innovation strategy?
  - An Innovation Strategy can be based on "types" of innovation
  - Keely, et. al., have defined the following types of innovation that any business can use to assess "how" they might address innovation
  - Without a methodology to assess/address innovation, innovation will typically fail
  - Many times innovation is not successful because it is not clear how it is realized by the business and it needs to be implemented as a solution

# INNOVATION STRATEGY


Image Source: https://divergentthinking.design/03-ten-types-of-innovation-workshop

Note: The information on the following slides is taken from the book in reference 6 "Ten Types of Innovation – The Discipline of Building Breakthroughs".



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# INNOVATION STRATEGY

- Profit Model
  - Innovative profit models often challenge an industry's aging assumptions about what to offer, what to charge or how to collect revenues
  - Potential Profit Model Innovations
    - Does the company make money in ways that are different from competitors or industry norms?
    - Are margins (e.g., gross margins) significantly higher or lower than those of competitors? Are there substantial differences in variable or fixed costs?
    - Are there interesting differences between who uses the offering and who pays for it? Does the company have multiple revenue streams from different constituencies?
    - Does the business generate cash quickly? Are working capital requirements low?
  - Example Company
    - Gillette – razor and blades profit model

# INNOVATION STRATEGY

- Network
  - Network innovations provide a way for businesses to take advantage of other companies' processes, technologies, offerings, channels and brands. A company can capitalize on its own strengths while making use of the capabilities and assets of others
  - Potential Network Innovations
    - Does the company work with other firms or collaborators to develop new offerings that drive a shift from business as usual?
    - Or, does the company enable the offerings of other players by lending them its channels, processes, brand or other unique assets?
    - Has the company formed any unusual partnerships such as ones that seem unrelated to its current business or with competitors?
    - Does the company collaborate with its suppliers and/or customers to develop, test or market new products?
  - Example Company
    - UPS and Toshiba – UPS technicians from the logistics arm repair broken Toshiba laptops at UPS shipping hubs

# INNOVATION STRATEGY

- Structure
  - Structure innovations are focused on organizing hard, human or intangible company assets in unique ways that create value. Good examples include building incentive systems to encourage employees to work toward a particular goal, standardizing assets to reduce operating costs and complexity or even creating a corporate university to provide sophisticated, continuous training.
  - Potential Structure Innovations
    - Does the company have a unique or unusual organizational structure?
    - Is the company known for attracting top talent in a particular field or function, e.g., marketing or materials science?
    - Does the company use hard assets in ways that are very different from competitors, e.g., unusual standardization or diversity of machines or other equipment?
  - Example Company
    - Southwest Airlines – flew only Boeing 737 aircraft until its acquisition of Air Tran in 2011

# INNOVATION STRATEGY

- Process
  - Process innovations involve the activities and operations that produce a company's primary offerings. They often form the core competency of an enterprise and may include patented or proprietary approaches that yield long term advantage.
  - Potential Process Innovations
    - What is the company uniquely skilled at doing or delivering across products, services and platforms?
    - Are the company's variable costs or working capital substantially lower than at competitors or when compared with industry norms?
    - Does the company own a cluster of patents around a particular technology, methodology or process?
  - Example Company
    - Toyota – lean production system reduced waste and excess driving efficiency and continual process and product improvements

# INNOVATION STRATEGY

- Product Performance
  - Product Performance innovations address the value features and quality of a company's offering(s). This type of innovation involves both entirely new products in addition to updates and line extensions to existing products that add substantial value. This could also be viewed as a "Service" offering, e.g., a differentiated consulting service.
  - Potential Product Performance Innovations
    - Does the company produce a notably superior offering that dominates market share or earns a substantial premium?
    - Do the company's products possess unique features and functionality that captivate customers?
    - Or, are the company's products notably simpler and easier to use than those of competitors?
    - Are the products uniquely styled or focused on particular niches and audiences in ways that others can't match?
  - Example Company
    - Dyson – innovative transparent, bag-free design that showed people how much dirt was being cleaned from their floors

# INNOVATION STRATEGY

- Product System
  - Product System innovations are rooted in how individual products and services connect or bundle together to create a robust and scalable system. This might be fostered through interoperability, modularity, integration or other ways of creating valuable connections between otherwise distinct and disparate offerings. Product bundling is a common example of Product System innovation.
  - Potential Product System Innovations
    - Does the company make multiple products that connect with one another in unique ways?
    - Are other players creating products that interface with the company's offerings or depend on them to function?
    - Does the company offer distinct products and services that can also be interfaced or purchased as packages?
  - Example Company
    - Microsoft – MS Office was the result of bundling their individual products into an integrated system of products

# INNOVATION STRATEGY

- Service
  - Service innovations ensure and enhance the utility, performance and apparent value of an offering. Common examples of Service innovations include product use enhancements, maintenance plans, customer support, information and education, warranties and guarantees.
  - Potential Service Innovations
    - Do customers rave about their interactions with the company – particularly those instances where things went wrong and the company somehow made everything right?
    - Does the company provide any interesting guarantees, warranties, or other forms of assurance around its offerings?
    - Has the company implemented websites, help lines or other methods that highlight additional product features or applications or that make it easier to use its services?
    - Are there robust communities that celebrate the services, help customers connect with like-minded users or otherwise enhance their experience?
  - Example Company
    - Sysco – offered Business Reviews which were a free consulting service to help design menus or plan back office logistics

# INNOVATION STRATEGY

- Channel
  - Channel innovations encompass all the ways that you connect your company's offerings with your customers and users. Skilled innovators often find multiple but complementary ways to bring their products and services to customers (e.g., physical stores and e-commerce are still complementary).
  - Potential Channel Innovations
    - Does the company deliver its offerings to customers and users in ways that challenge or confound what is usual within the industry?
    - Do customers tell others about their memorable interactions with the company?
    - Does the company use different channels in complementary ways, e.g., showcasing in retail outlets but delivering them through direct or virtual channels?
    - Do other players, including partners, customers and competitors, help sell or deliver the company's offerings?
  - Example Company
    - Nike – NIKETOWN stores were primarily designed to provide an immersive, impressive experience to shoppers.

# INNOVATION STRATEGY

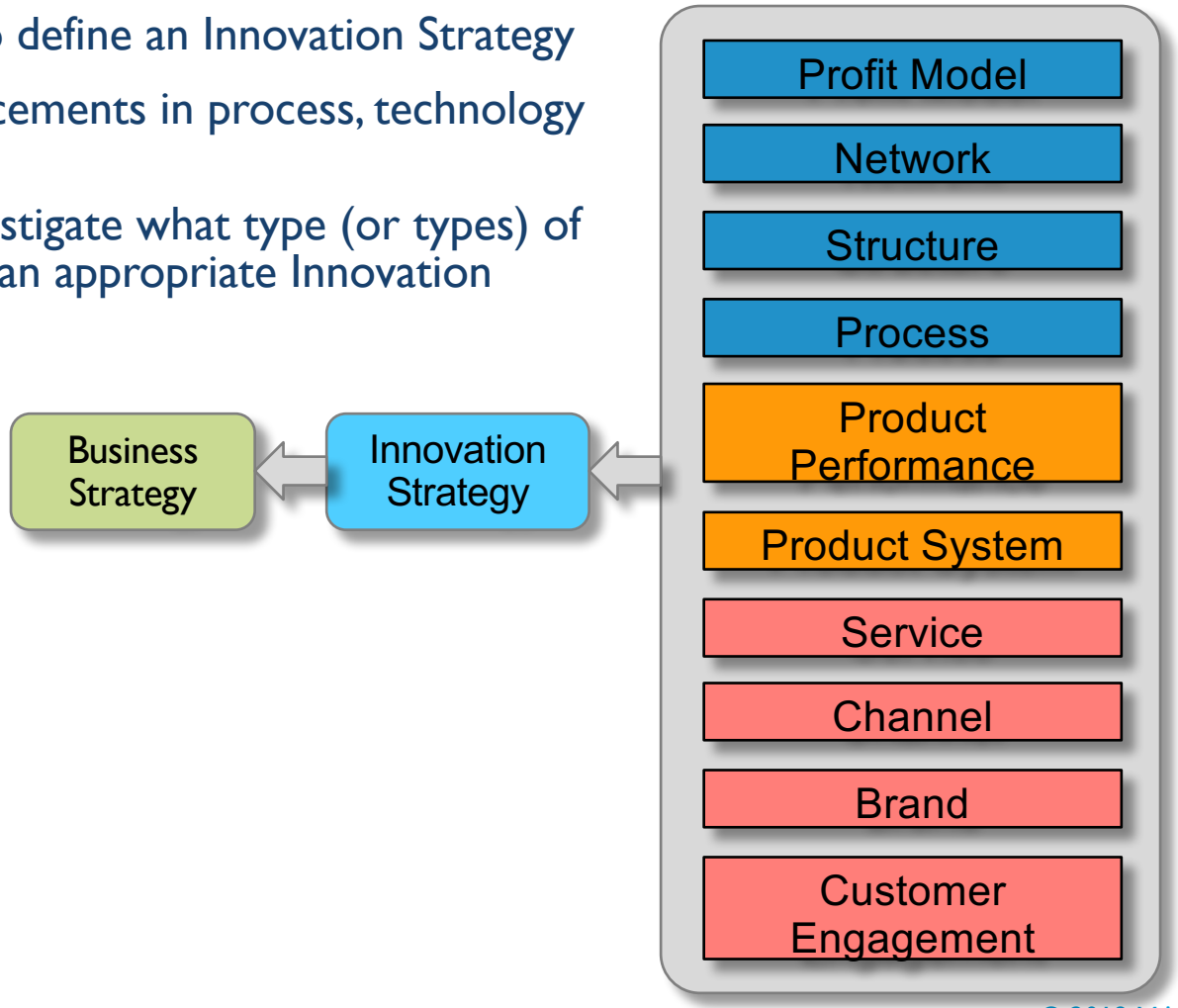
- Brand
  - Brand innovations help to ensure that customers and users recognize, remember and prefer your offerings to those of competitors or substitutes. Great brands provide a "promise" that attracts buyers and conveys a distinct identity.
  - Potential Brand Innovations
    - Does the company have an unusually distinct or vivid identity, particularly compared to its rivals?
    - Is the company's brand user by other business partners including suppliers, customers or even competitors?
    - Do the company's customers and users see themselves as part of a distinct community or movement centered around the brand?
    - Has the company extended a brand to an unusually diverse array of businesses, or used its brand to foster integration and connectivity across offerings?
  - Example Company
    - Virgin – started out as a mail order business selling cheap records in 1970 but is currently known as a leading "international investment group". Each company enjoys the Virgin brand.

# INNOVATION STRATEGY

- Customer Engagement
  - Customer Engagement innovations are about understanding the deep-seated aspirations of customers and users and using those insights to develop meaningful connections between them and the company.
  - Potential Customer Engagement Innovations
    - Does the company take something arcane, difficult or complex and make it easy for users to accomplish or master?
    - Do the company's offerings take on an identity of their own?
    - Do the offerings confer a unique identity, status or sense of recognition to users?
    - Do customers talk about how a product or service has become a part of their lives?
  - Example Company
    - Apple – shows off its new hardware and software to developers and affiliates worldwide at its World Wide Developers Conference who provide feedback on the company's new technologies.

# INNOVATION STRATEGY

- One or more types of innovation may be required to define an Innovation Strategy
- An Innovation Strategy encourages the use of enhancements in process, technology and information
- A prescriptive process uses Business Strategy to investigate what type (or types) of innovation may be appropriate in support of aligning an appropriate Innovation Strategy



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# TINKLEMAN HISTORY AND LAB 1



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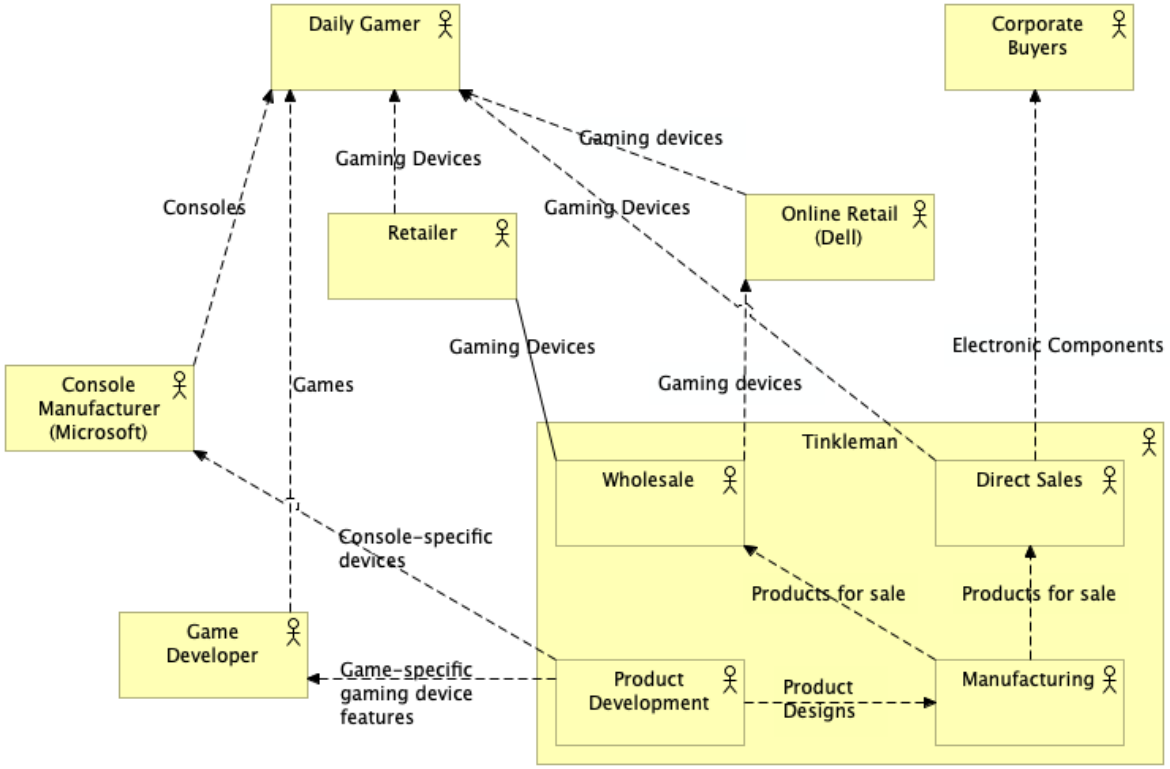
# TINKLEMAN CASE STUDY

Founded in 2000, Tinkleman Gaming is a well-established wholesale distributor and manufacturing company

Tinkleman Turbo gaming controller, Tinkleman gaming mouse and keyboard built and designed with gamers in mind.

Product lines success driven by Tinkleman's dedication to quality in engineering and an obsessive need to provide the best gaming devices for a reasonable price.

Design excellence, gamer community involvement and a commitment to a self-owned and optimized manufacturing chain



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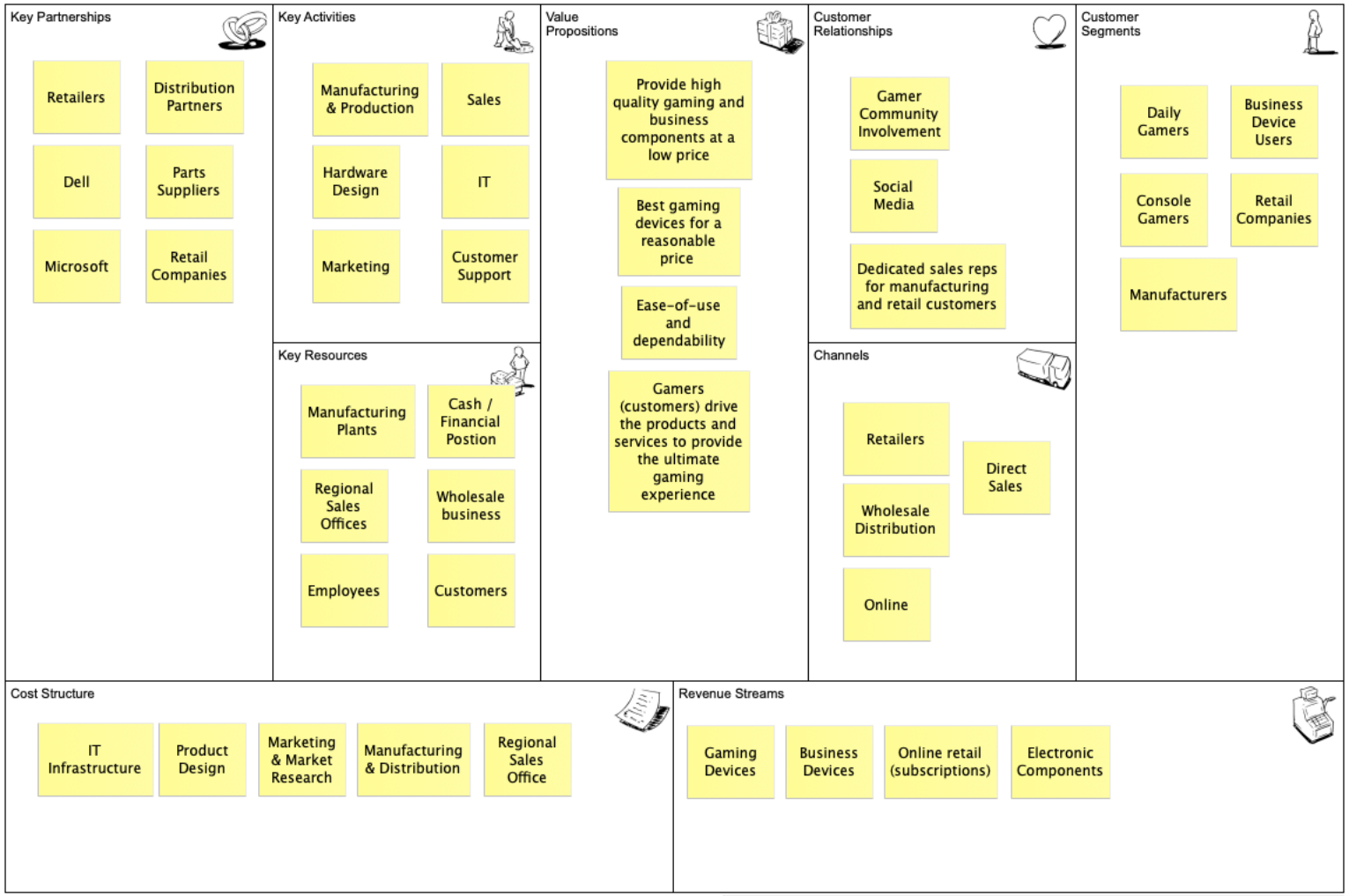
# OVERVIEW OF BUSINESS ARCHITECTURE ARTIFACTS

- Business Model Canvas
- Capability Map
- Business Motivation Model

- Lab Activity
  - Read Tinkleman business case and update your copies of the Business Model Canvas, Capability Map and Motivation Model to reflect your chosen innovation opportunities using one or more of the 10 Types of Innovation

# BUSINESS ARCHITECTURE ARTIFACTS – CURRENT STATE

Business Model Canvas[7]





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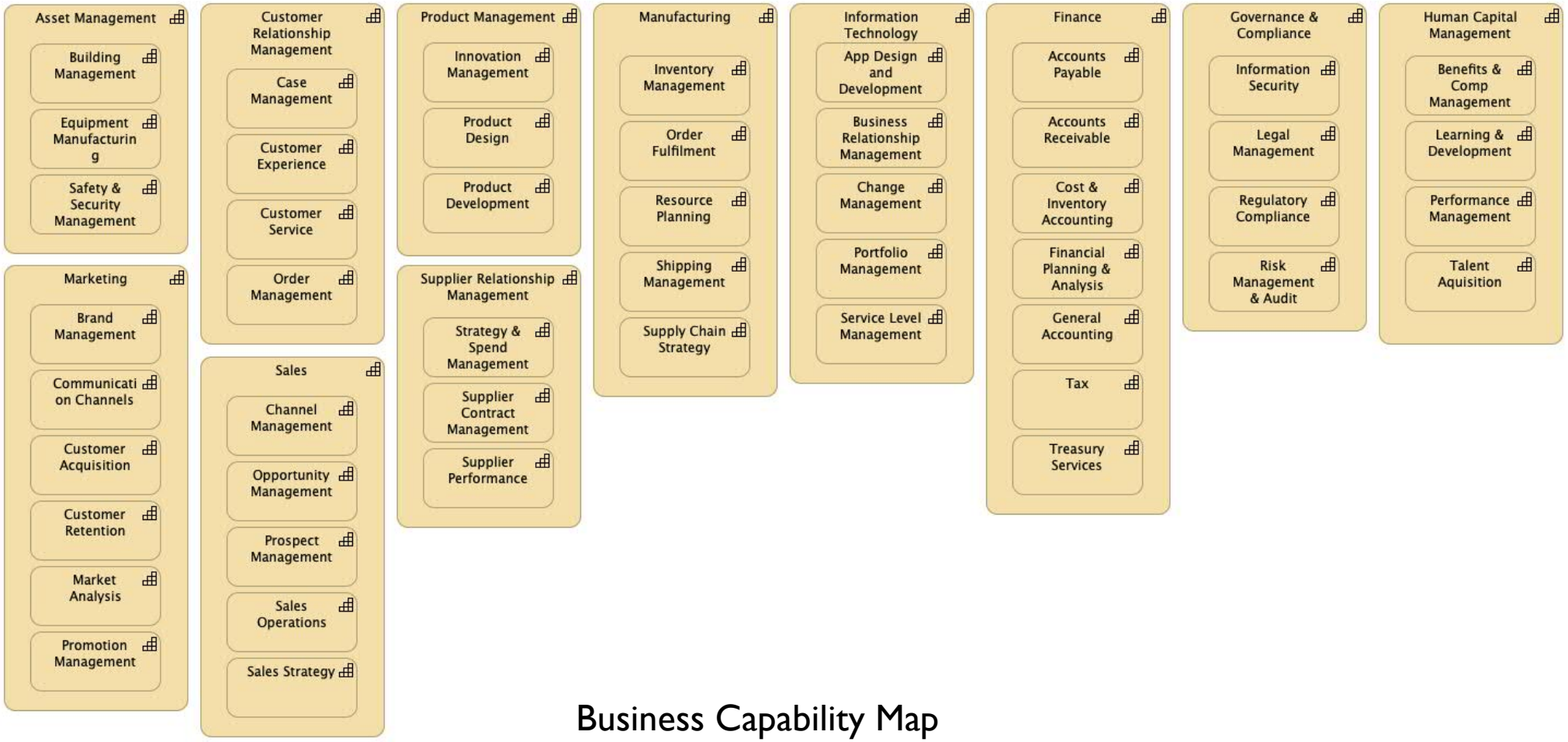
# CAPABILITY MAP – CURRENT STATE




Business Capability Map



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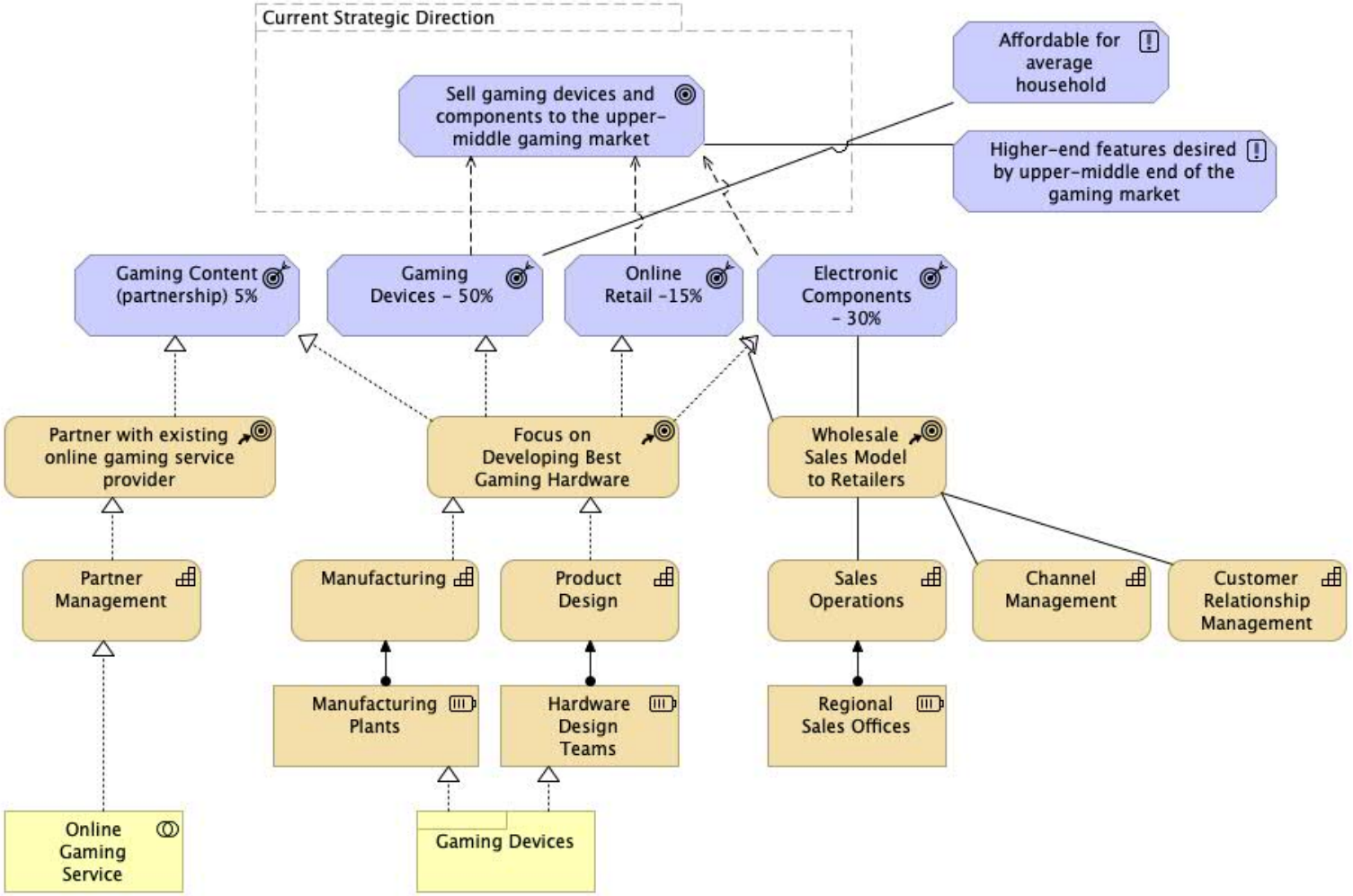
# BUSINESS MOTIVATION MODEL – STRATEGY VIEW



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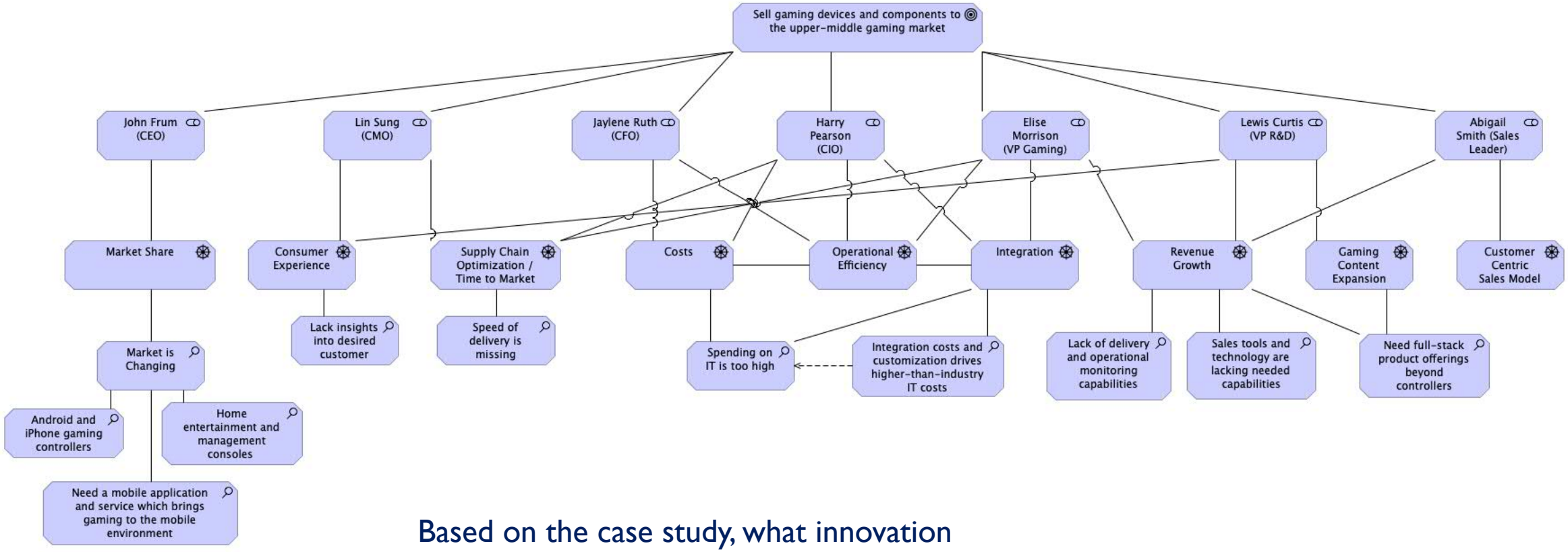
# LAB TIME

- Read the Tinkleman case study, referring to the provided models as needed
- What to look for:
  - What factors in the environment (internal or external) are driving the need for change?
  - What opportunities for innovation do you see?
  - How would pursuing the innovation opportunities impact the the business purpose, strategy, and/or existing capabilities or necessitate new capabilities?

# BUSINESS MOTIVATION MODEL – EXECUTIVE ASSESSMENTS




Based on the case study, what innovation opportunities did you identify?



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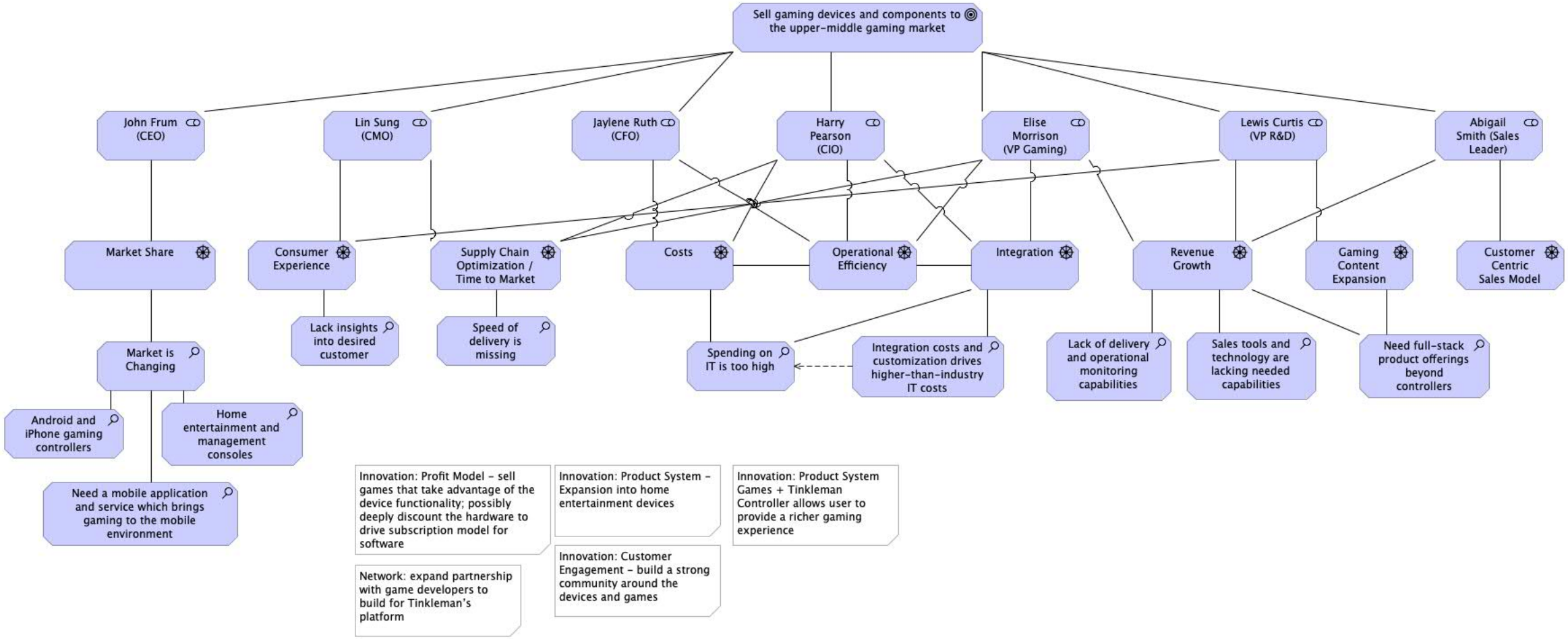
# BUSINESS MOTIVATION MODEL – EXECUTIVE ASSESSMENTS



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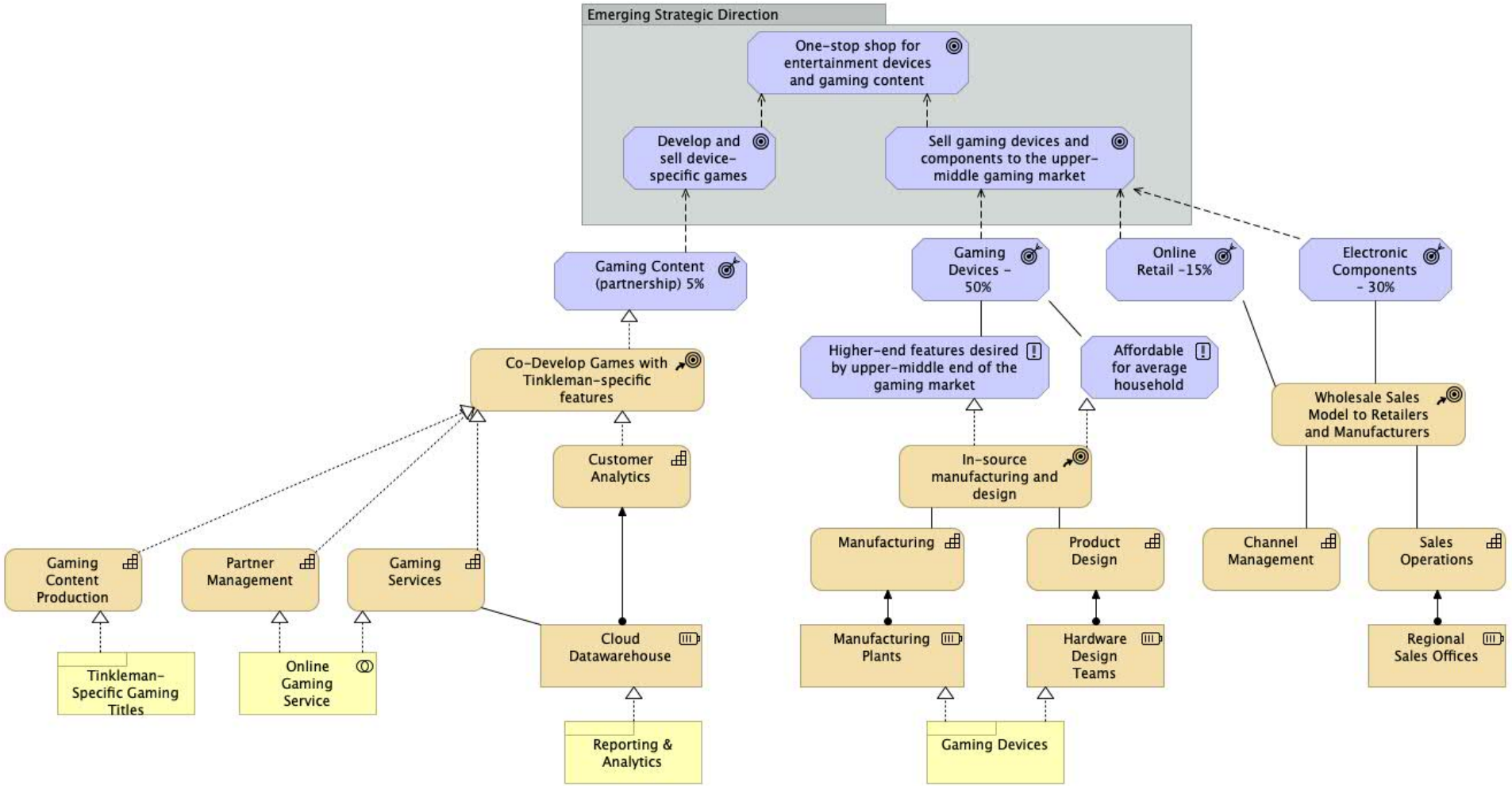
# SELECTED INNOVATIONS: NETWORK + PRODUCT SYSTEM

- Tinkleman leadership has decided to expand their partnership with gaming developers (Network innovation) to create deeper integration of Tinkleman controllers and gaming content (Product System innovation) to provide a richer gaming experience.
- This will drive Tinkleman to shift to a more "solution-focused" approach to the market vs. their traditional approach focused on selling hardware products.
  - Build out new capabilities around managing partnerships. Currently working with a single partner and leveraging what that partner already has in place (online platform, existing games, etc.)
  - Tinkleman will be working to integrate their specific controllers into the game features. Users with Tinkleman devices will get enhanced features and abilities in games that have been customized for Tinkleman. Knowing what kinds of features / abilities are most desired by gamers (and which may also drive them to upgrade their existing controllers) will require more advanced data analytics than are in place today.
  - Success with specific games / features may open new partnership opportunities in the future and may eventually bring Tinkleman directly into the gaming development business

# BUSINESS MOTIVATION MODEL - EMERGING STRATEGY



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# PORTFOLIO AND SOLUTION VISION
## (BASED ON SCALED AGILE FRAMEWORK CONCEPTS)

- Portfolio ("Develop and sell device-specific games")
  - By partnering with gaming content creators, develop games which provide the gamer with enhanced features and abilities when they play using a Tinkleman device
  - This will provide the gamer with a richer, more exciting gaming experience than they receive using non-Tinkleman controllers – it becomes a differentiator for Tinkleman in the gaming market
  - In order to achieve this vision, Tinkleman will need to partner with gaming content developers to integrate Tinkleman device features into their games and Tinkleman will need to get much more detail in how gamers user the controllers and which gaming features are most compelling.
- Solution Vision (Customer Analytics)
  - What will this new solution do?
    - The Customer Analytics product will collect information from gamers using both Tinkleman and non-Tinkleman devices leveraging our partner's current online gaming platform.
  - What problems will it solve?
    - At present, Tinkleman only knows who buys their controllers if they register the product. By partnering with the gaming partner, and linking their information with Tinkleman's CRM data, we will begin to get a richer view into who is using the controllers, with which games, and with what levels of success.
  - What features and benefits will it provide?
    - The Customer Analytics product will provide Tinkleman and its gaming partner with near-real-time data into the popularity of specific controllers with specific games, how successful gamers using those products are within the games, and where opportunities exist to provide gamers with non-Tinkleman controllers some advantages if they switch controllers

# BUSINESS ARCHITECTURE ARTIFACTS – FUTURE STATE


Additions to the Capability Map



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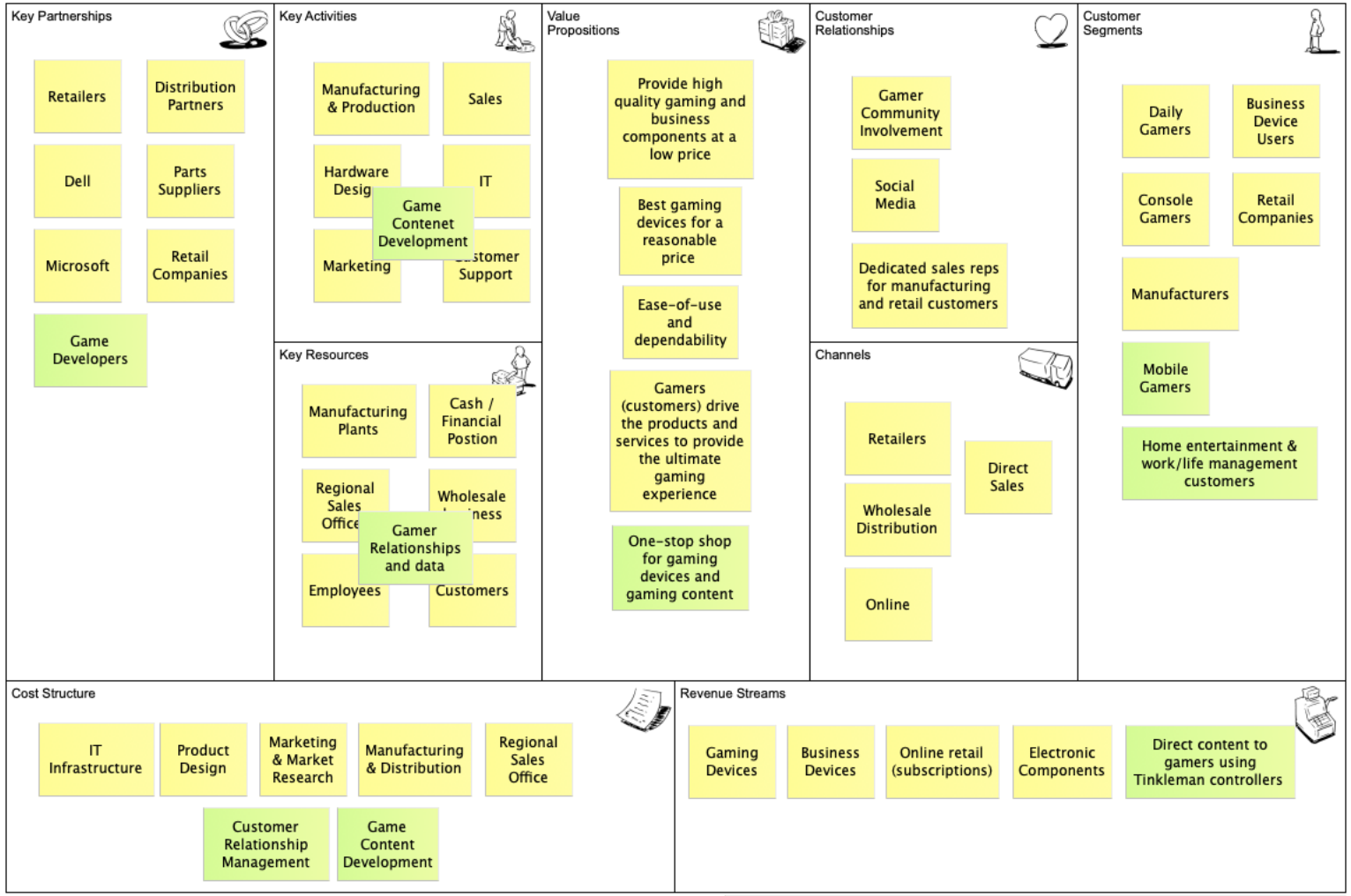
# BUSINESS ARCHITECTURE ARTIFACTS – FUTURE STATE

Business Model Canvas[7]





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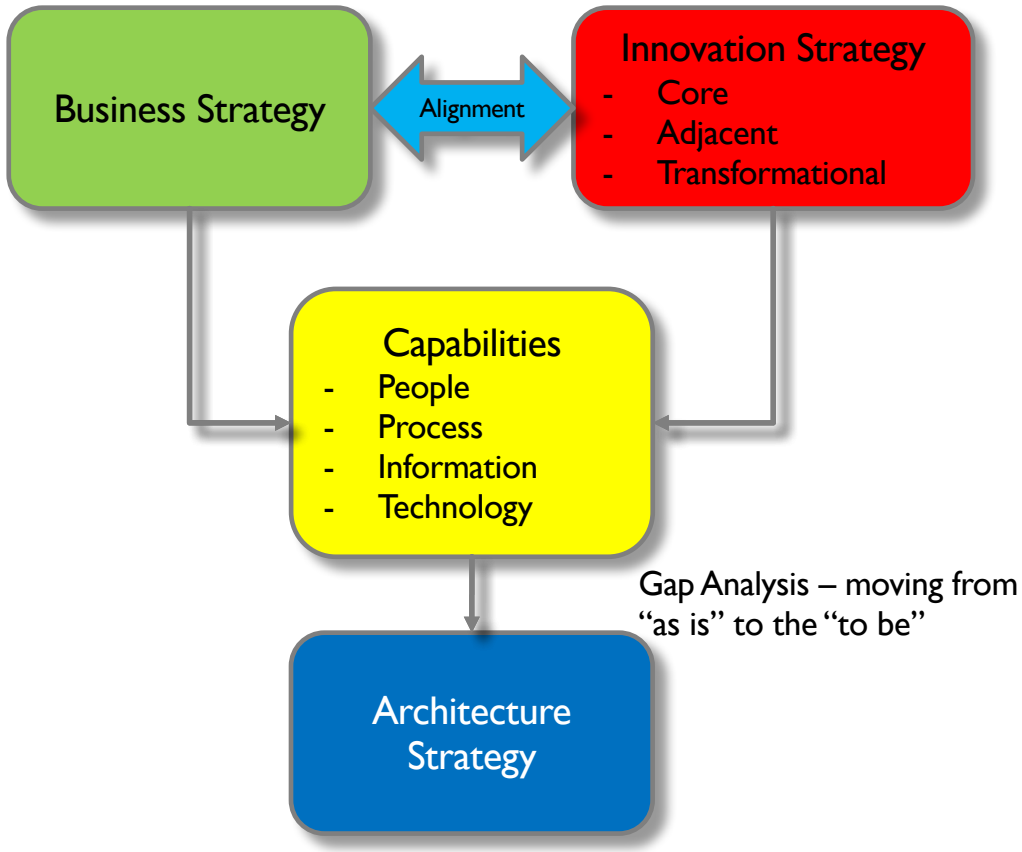
# ARCHITECTURE STRATEGY

- The capabilities of an organization support Business Strategy and Innovation Strategy through people, process, information and technology resources
- Architecture strategy is aligned to the capabilities and the gaps associated with them (determined through a Gap Analysis)
- Filling Capability gaps will drive alignment with Innovation and Business strategies




Aligning Business Strategy, Innovation Strategy and Architecture Strategy



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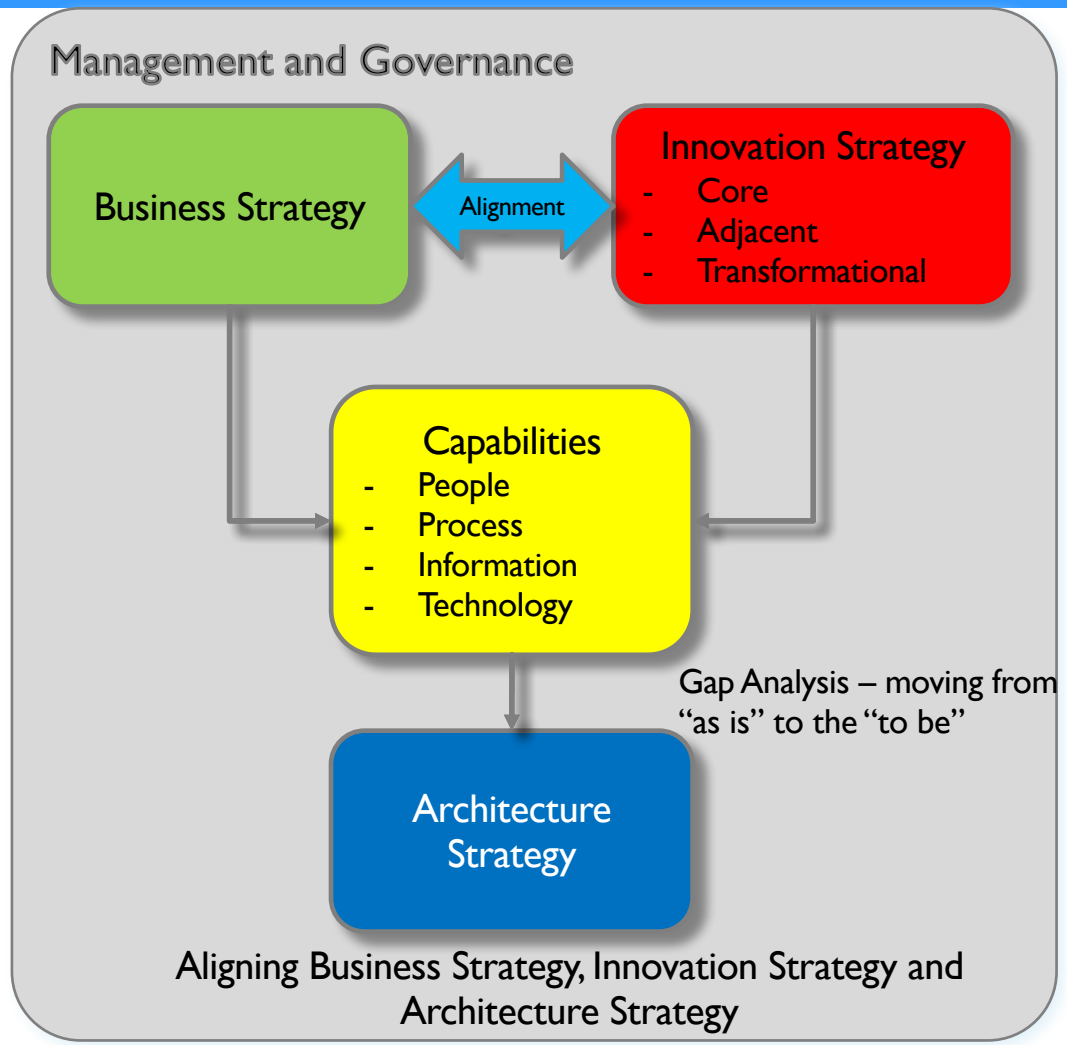
# ARCHITECTURE STRATEGY

- A focused management and governance process needs to be wrapped around the alignment process – this is a key gap in addressing innovation
- Policies, standards and procedures should be developed that result in alignment of stakeholders who are involved in the Management and Governance process
- The appropriate business and IT management needs to be determined who should be involved in the Management and Governance process



Aligning Business Strategy, Innovation Strategy and Architecture Strategy



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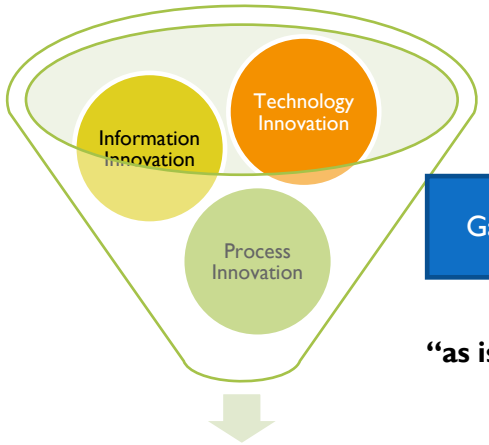
# ARCHITECTURE STRATEGY

## Focusing on Innovation

**Capability Innovation**

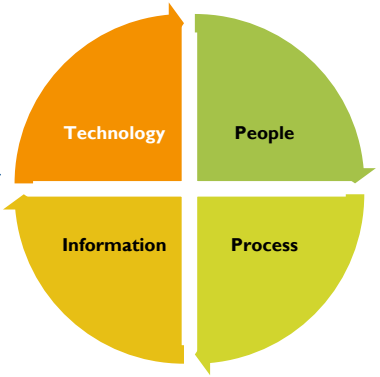



Aligned with the Innovation Strategy

Gap Analysis

**"as is" vs "to be"**

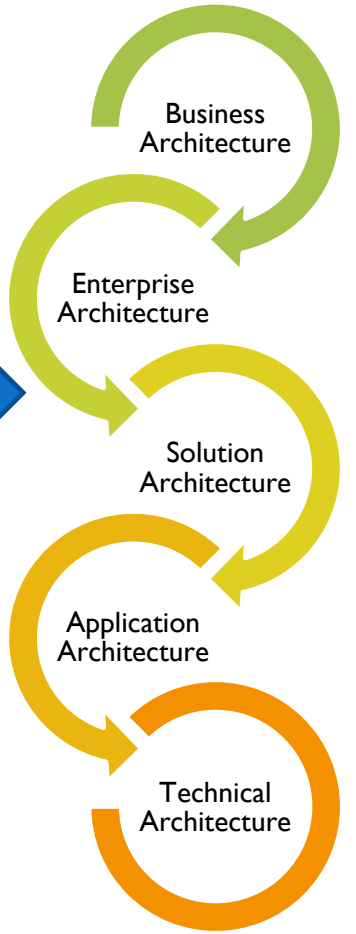
**Filling Capability Gaps**




Architecture is a sequential and iterative process that focuses on different levels of the architecture based on the project lifecycle process or agile program increments.

Generates Requirements/ Stories

**Architecture is a Collaborative and Iterative Process**




- Data Architecture
- Security Architecture



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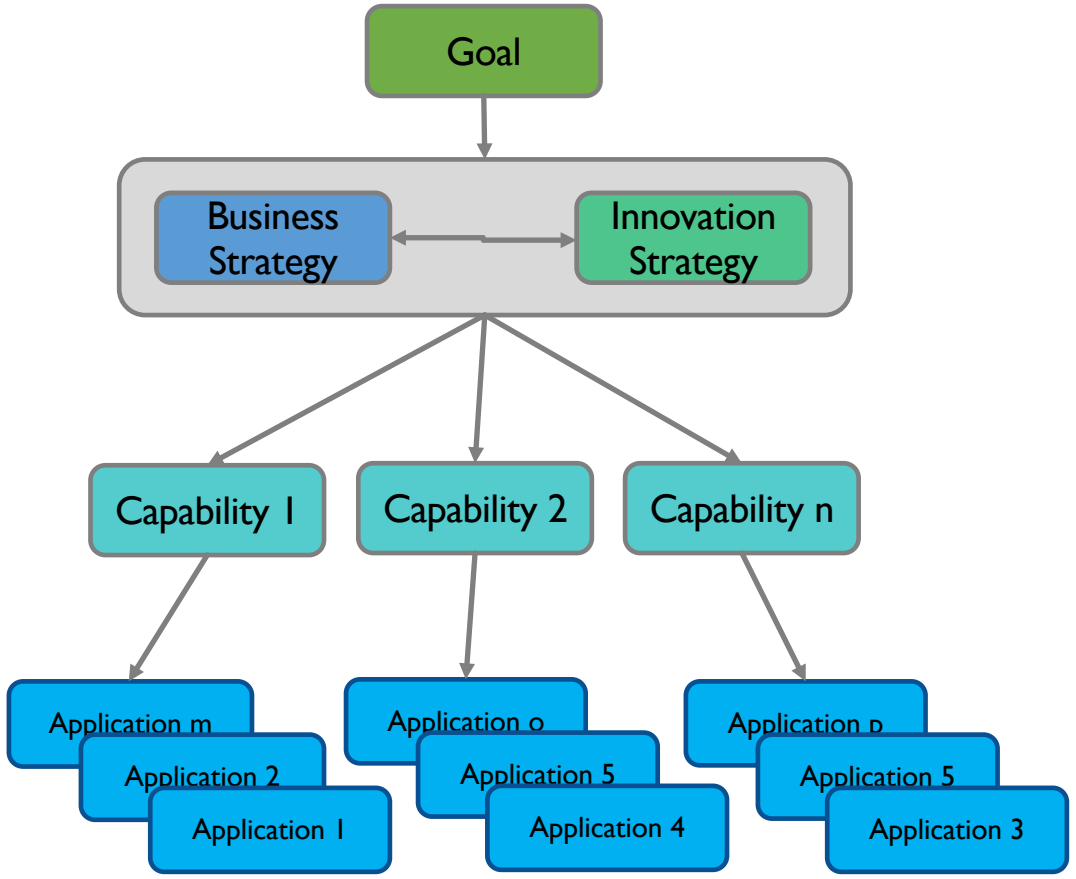
# ARCHITECTURE STRATEGY

## Capability to Application Mapping

- The next step in the process is to use the new or modified capabilities and determine the applications that are involved in the solution
- Business Architecture as a practice develops Capability Maps (defining the set of capabilities of a business that allows it to deliver value) that are mapped to lines of business or organizational entities
- Enterprise and Business Architecture develop the Application to Capability maps that provide a link between Business and IT



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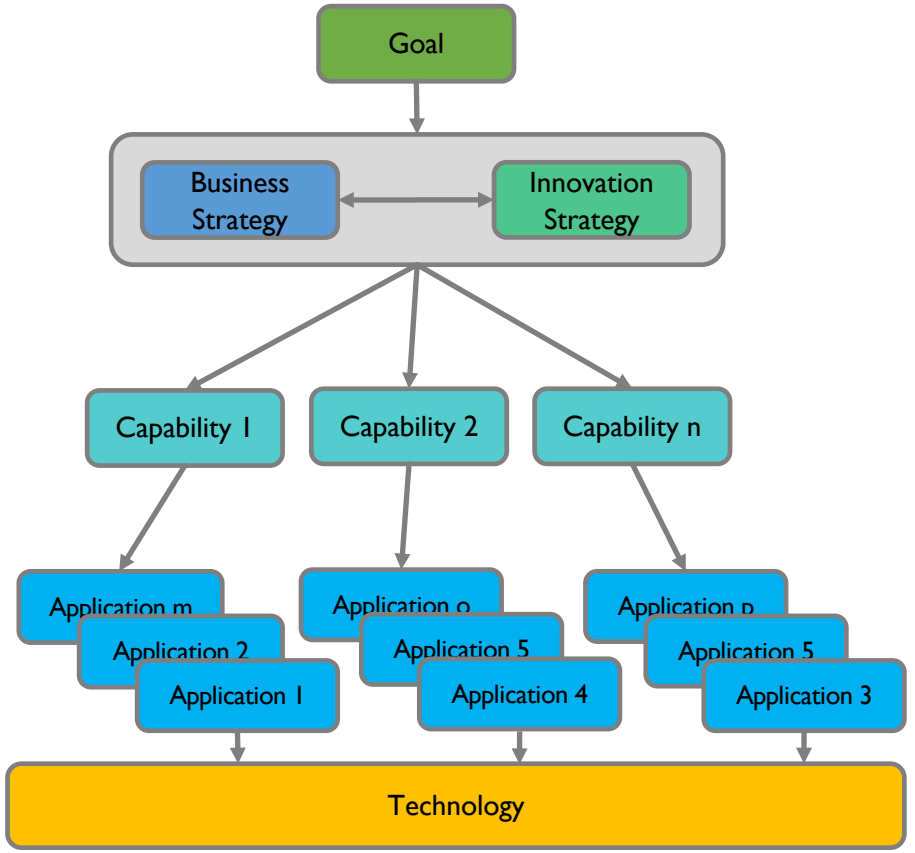
# ARCHITECTURE STRATEGY

## The End to End View – Strategy to Execution

- A simplified view of the alignment of goals that drive Business Strategies aligned with Innovation Strategies
- Capabilities are the links between Business and IT that are operationalized through people, process, information and technology resources
- Capabilities are mapped to Applications that are associated with new or modified Capabilities that support the business
- Applications provide the means to physically deliver value to the business supporting the strategies
- Applications are supported by technology (e.g., network, storage, compute, software) that operationalize the Capabilities



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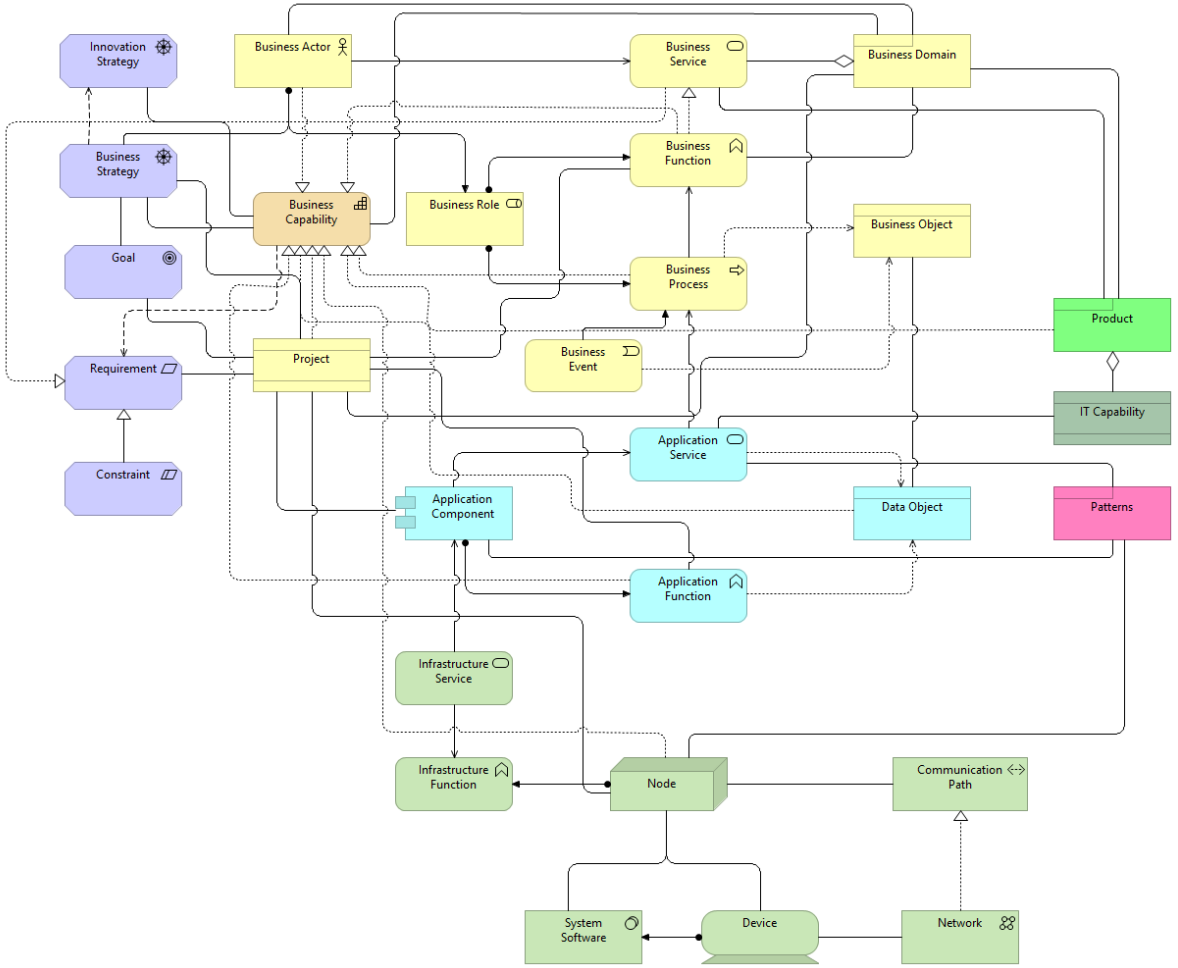
# ARCHITECTURE STRATEGY

## Architecture Metamodel

- An Architecture Metamodel describes how artifacts of the architecture exist and are related to each other
- It indicates the relationship of the architecture artifacts involved in translating between the Business and Innovation Strategies and how it permeates throughout the architecture
- A metamodel is helpful to understand why, what and how an architecture is developed to support solutions



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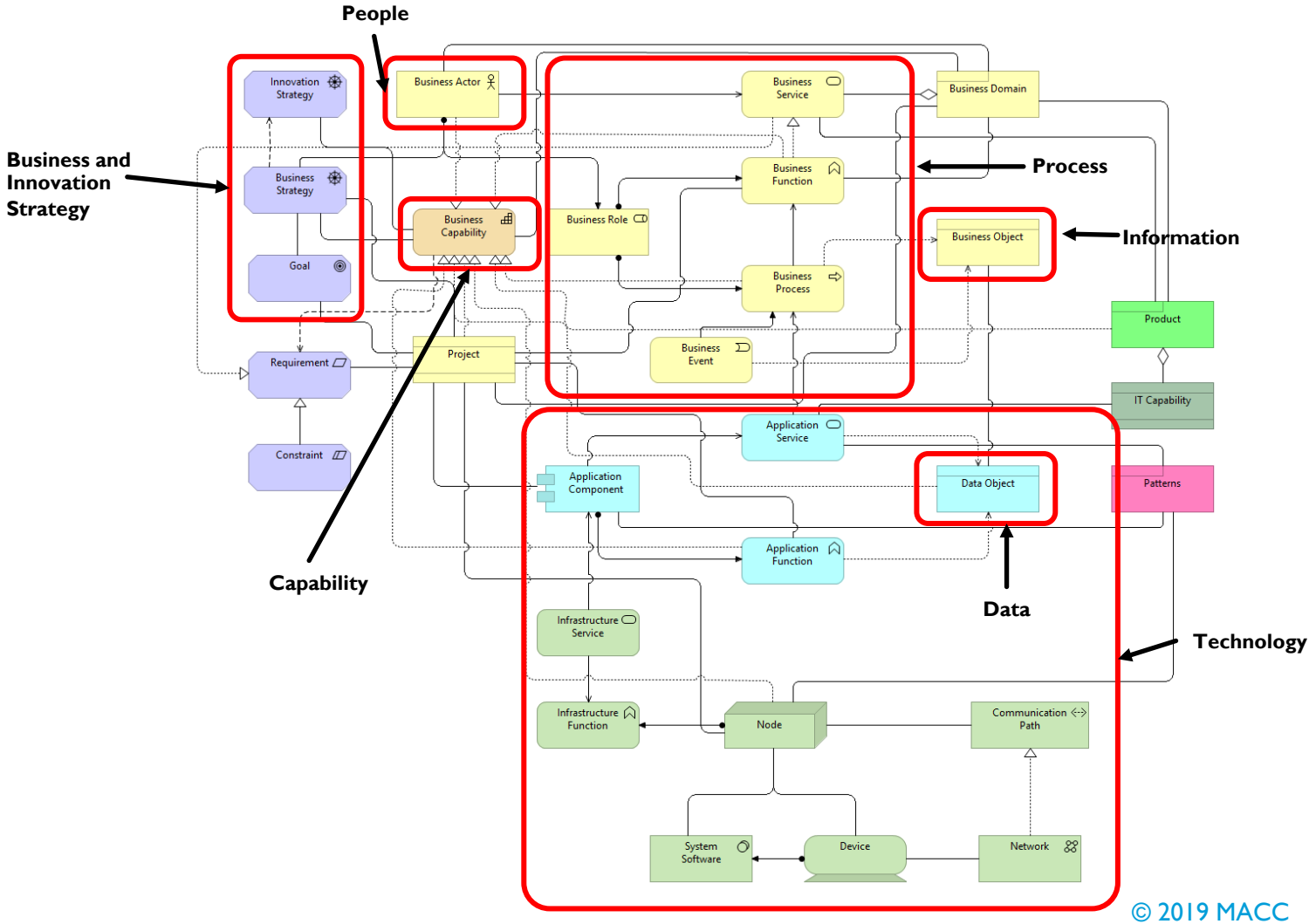
# ARCHITECTURE STRATEGY

- Understanding the relationships of artifacts to the development of Business Strategy, Innovation Strategy and Architecture Strategy
- The architecture solution is driven by the Business, Innovation and Architecture Strategies resulting in alignment between Business and IT
- Note that this metamodel assumes that capabilities are delivered through "projects"
- A metamodel will be presented later that represents the agile development process from a "product" perspective



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# ARCHITECTURE ROLES AND PROCESSES

## Architecture Roles

- Business Architecture
  - Business Architecture is a blueprint of the enterprise that provides a common understanding of the organization and is used to align strategic objectives and tactical demands
- Enterprise Architecture
  - Enterprise Architecture applies architecture principles and practices to guide organizations through the business, information, process and technology changes necessary to execute their strategies
- Solution Architecture
  - Solution Architecture is responsible for the design of one or more applications or services within an organization where the architect must have a balanced mix of technical and business skills and works with Enterprise Architecture. The Solution Architect typically works at the conceptual and logical levels of an architectural solution
- Application Architecture
  - Application Architecture guides the application design at the physical level and includes defining the interaction between application, databases, middleware systems and cloud environments

# ARCHITECTURE ROLES AND PROCESSES

## Architecture Roles

- Information Architecture
  - Information Architecture focuses on organizing, structuring and labeling content in an effective and sustainable way to help users find information and complete tasks. Data Architecture supports Information Architecture and is composed of models, policies, rules or standards that govern what data is collected and how it is stored, managed and integrated in order to put it to use in data systems. In general, Information Architecture addresses the conceptual and logical uses of information and Data Architecture addresses the physical way that it is used in an application.
- Security Architecture
  - Security Architecture is the design artifacts that describe how security controls (security countermeasures) are positioned and how they relate to the overall systems architecture and how the controls maintain the system or application's quality attributes such as confidentiality, integrity and availability. It is typically aligned with the organization's appropriate security policies.
- Technical Architecture
  - Technical Architecture is the architecture of hardware, networks and system software that supports the applications software and business systems of an enterprise. It ensures that appropriate use of IT infrastructure, network and operations as an asset meeting availability, performance and quality of service requirements for the platforms and applications built on them.

# ARCHITECTURE ROLES AND PROCESSES

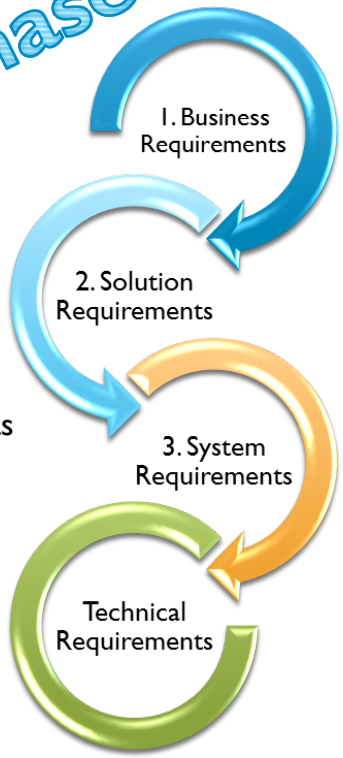
## Project Lifecycle and Architecture Process

NOTE: The Analysis, Planning and Design stages are similar to the cycle used in agile development processes but are completed in increments over time and requirements are stories in agile processes.

- Analysis → Conceptual
  - Business Architect – Business Strategy
  - Enterprise Architect – IT Strategy
  - Solution Architect – Project Conceptual Solution
- Planning → Logical
  - Solution Architect – Project Logical Solution
  - Security Architect – Project Security
  - Information Architect – Project Information
- Design → Physical
  - Solution Architect – Project Solution Guidance
  - Security Architect – Project Security
  - Information Architect – Project Information
  - Application Architect – Project Applications
  - Technical Architect – Project Infrastructure

Guidance, Diagrams, Requirements

Innovation is considered at each phase!



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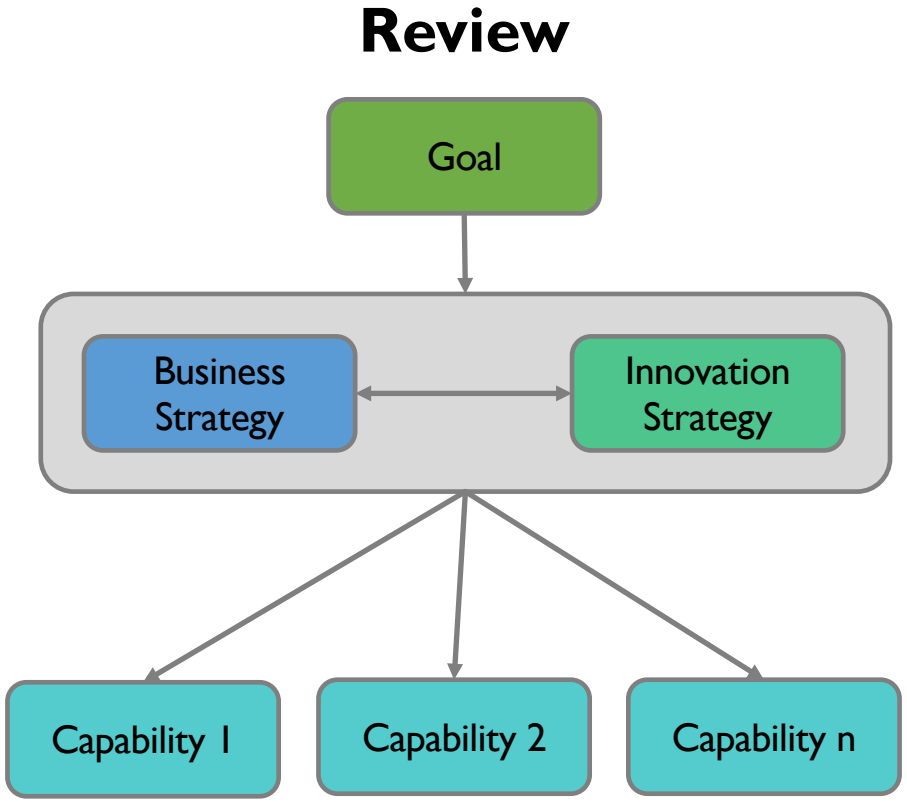
# ARCHITECTURE ROLES AND PROCESSES

- Business strategy must be aligned to innovation strategy in order to maximize innovation potential
- There are specific goals for each project that drive the Business Strategy
- Business Strategy and Innovation Strategy should be aligned as the innovation "types" are assessed for applicability in supporting the Business Strategy
- Capability (or Business Capability) – Functional building block of the Business Architecture that supports the business model and the Business Strategy. It defines the organization's capacity to successfully perform a unique business activity using people, process, information and technology resources.



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# INNOVATION AND ARCHITECTURE

## Information Innovation

- Information[8]
  - Data that is: 1) accurate and timely, 2) specific and organized for a purpose, 3) presented within a context that gives it meaning and relevance, and 4) can lead to an increase in understanding and decrease in uncertainty
  - Innovative ways of using information include understanding the relationships of data to information to knowledge to wisdom
  - Information innovation is the process of understanding how information can be transformed from data and translated into information (data with context), knowledge (reason, reflection and consideration), and wisdom (assertive conclusions on complex subjects)
  - The concept of information innovation results in potentially innovative systems or procedures to translate information through artificial intelligence, machine learning, natural language programming and other technologies to deliver the appropriate level of understanding of information

# INNOVATION AND ARCHITECTURE

## Process Innovation

- Process
  - Process Innovation means the implementation of a new or significantly improved production or delivery method (including significant changes in techniques, equipment and/or software).
  - Process is a mix of skill, technologies and facilities required to produce, deliver and support a service or product.
  - Process innovation happens when an organization solves an existing problem or performs an existing business process in a radically different way that generates something highly beneficial to those who perform the process or those who rely on the process or both.
  - Organizations often bring in new information technology systems or find ways to use older one's in new ways at the start of their process innovation efforts.
  - In general, process innovation can reduce cost, processing time, complexity and risk while improving value, efficiency and margins[9].

# INNOVATION AND ARCHITECTURE

## Technology Innovation

- Technology
  - Technological innovation (Wikipedia) is the process where the organization is on a journey where the importance of technology as a source of innovation has been identified as a critical success factor for increased market competitiveness.
  - Technological innovations are driven by companies who provide technology products and services
  - There are many different domains in IT where technology innovations need to be assessed
    - Security
    - Data
    - Integration
    - Platforms
      - IaaS
      - PaaS
      - SaaS
    - Storage
    - Networks
    - Virtualization

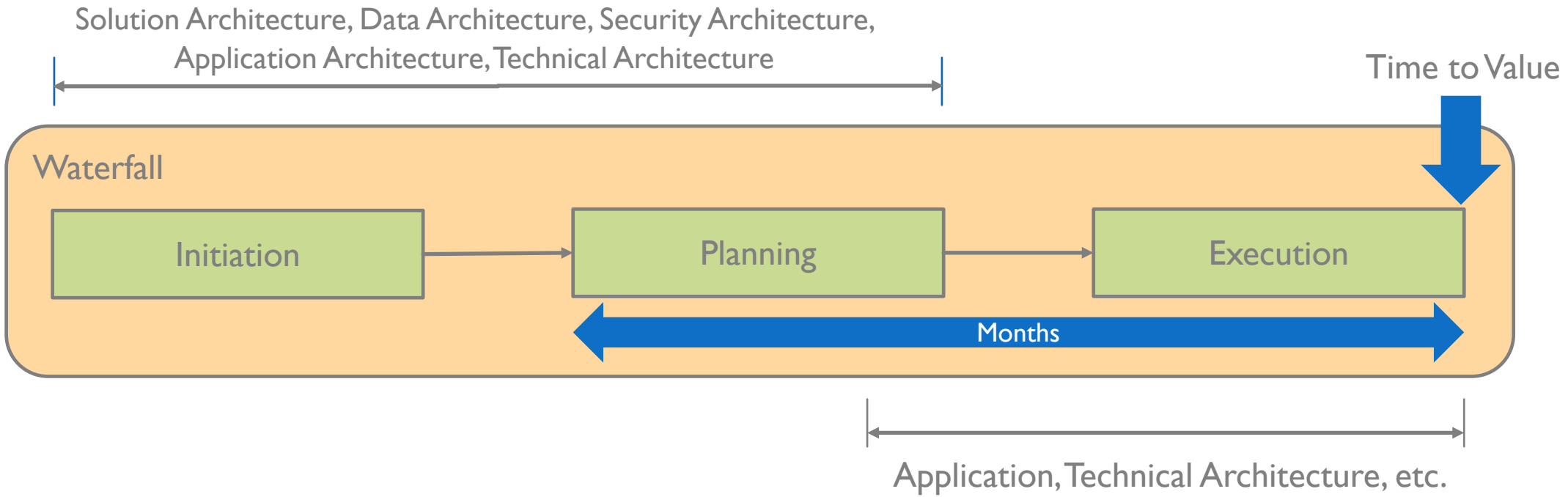
# AGILE ARCHITECTURE

- The following information provides a high level view of the agile architecture process as it supports agile development
- Agile development processes are gaining much popularity in delivering value to the business in faster increments
- Time to market is reduced enabling a company to compete in the marketplace faster than they were before
- From a business perspective, time to market is key (although the major driver is sales growth)

# AGILE ARCHITECTURE – TINKLEMAN'S INVESTMENT

- Tinkleman invested in training for their architects and some of their developers on agile development processes[12]
- The following slides are a high level description of the agile development process and how architecture fits into it
- Agile development requires appropriate engagement of architects at the right time in the development process
- Tinkleman made this investment because of trying to determine how they could deliver business value faster which has been an issue of the other senior leadership team members

# WATERFALL METHODOLOGY – TIME TO VALUE




Typical Waterfall project approach consisting of SDLC phases of Initiation, Planning and Execution. It normally takes months to deliver and is oftentimes outdated by the time the project is completed.



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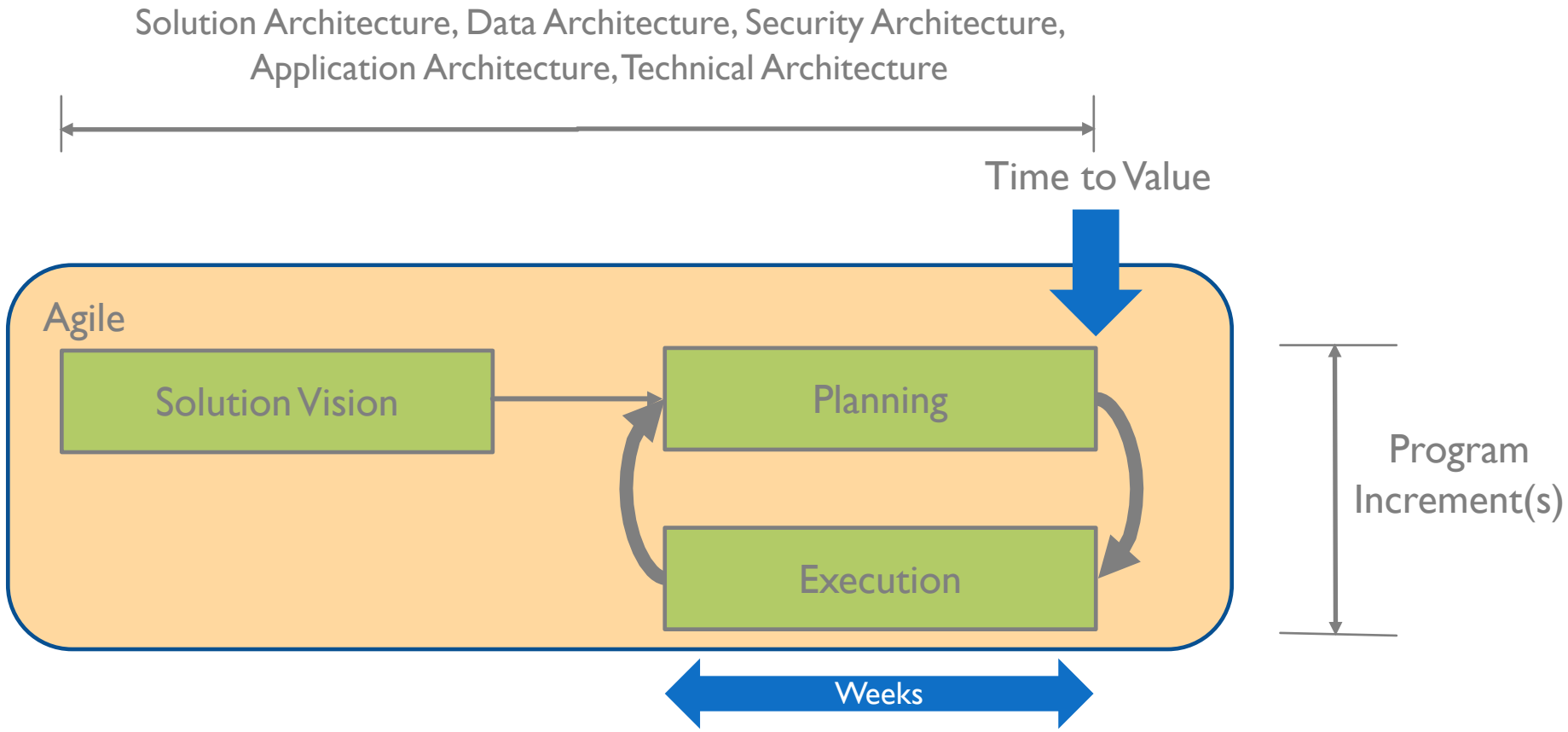
# AGILE METHODOLOGY – TIME TO VALUE




The way to view Agile is that it is the delivery of a Product that is broken down into Program Increments that deliver "business value" at the end of a Program Increment delivered in weeks, not months.



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# AGILE ARCHITECTURE - TERMS

- Solution Vision
  - A description of the future state of the Solution that will be developed or is under development
    - What will this new solution do?
    - What problems will it solve?
    - What features and benefits will it provide?
    - For whom will it provide them?
- Solution Roadmap
  - A schedule of events and milestones that communicate planned Solution deliverables over a planning horizon
- Significant Architecture Requirements
  - Architecture requirements that result in the delivery of new infrastructure or technology capabilities to support the Product
- Program Increment
  - A time box during which incremental value is delivered in the form of working, tested software systems
- Program Increment Roadmap
  - A series of planned PI's with milestones called out that support the Solution Roadmap

Note: Not all terms are associated with the Scaled Agile Framework

Reference: Scaled Agile Framework, https://www.scaledagileframework.com/

# AGILE ARCHITECTURE - TERMS

- Solution
  - Value streams that produce one or more Solutions that are products, services or systems delivered to the Customer whether internal or external to the enterprise
- Product Team
  - The team consists of a Product Owner, Scrum Master and appropriate technical stakeholders (e.g. Product Architect, Developers, QA)
- Product Owner
  - Responsible for maintaining the conceptual and technical integrity of the features or components of the Product
- Product
  - Something that is created through a process and that benefits the company as a capability or capabilities

Note: Not all terms are associated with the Scaled Agile Framework

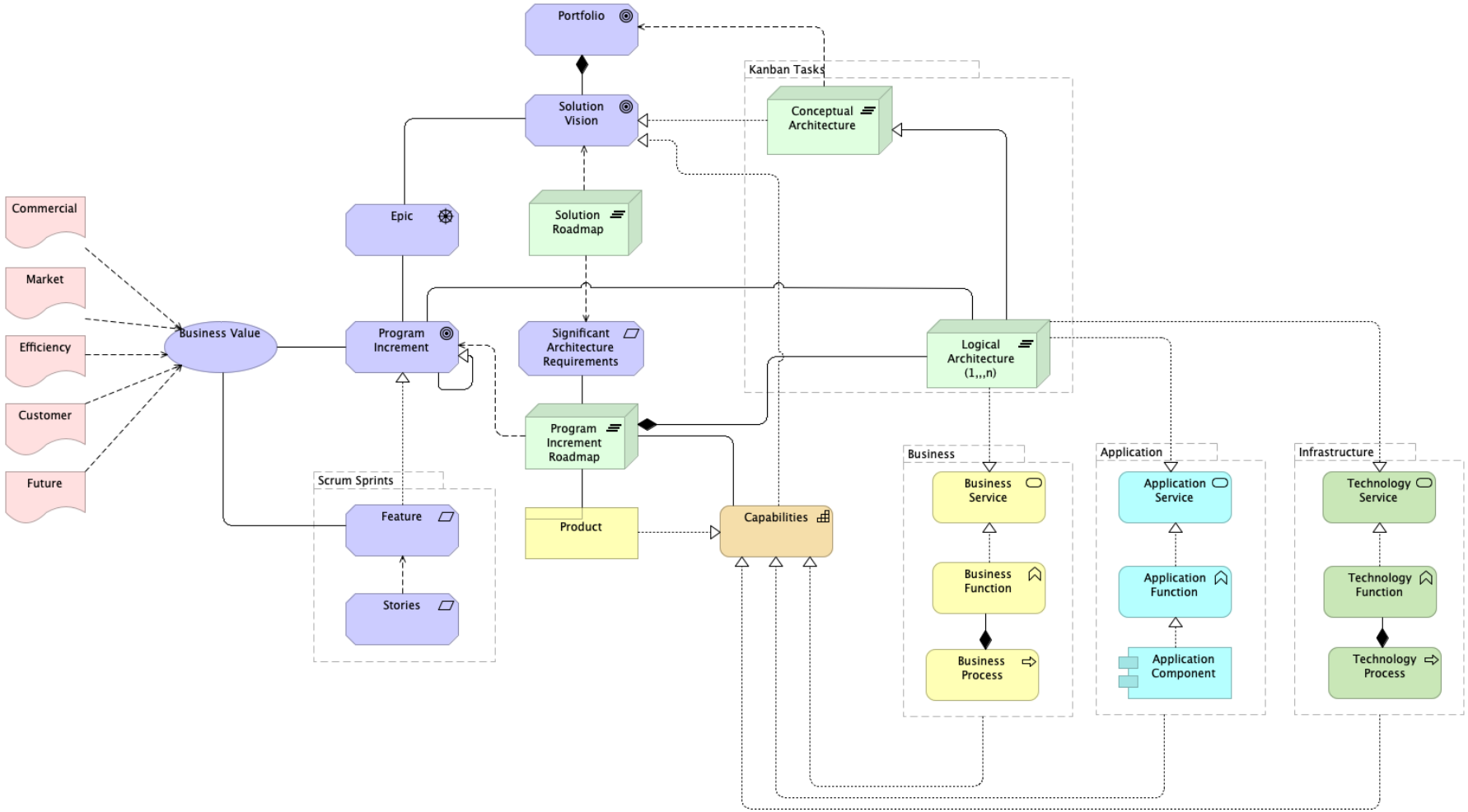
Reference: Scaled Agile Framework, https://www.scaledagileframework.com/

# AGILE ARCHITECTURE - VALUE

- Agile methods are based on "value" delivery
- What is business value?
  - Most often known as "business value" that includes all forms of value that determine the health and well-being of the enterprise in the long run
- What forms does business value take on?[11]
  - Commercial value
  - Market value
  - Efficiency value
  - Customer value
  - Future value

# AGILE ARCHITECTURE - METAMODEL

- An architecture metamodel of the Agile Architecture process
- The metamodel presents the relationships from an agile perspective how a Product is delivered and the artifacts that are involved in the definition, implementation and deployment of Product value by Program Increments




**Note:** The Agile Architecture Metamodel is nc



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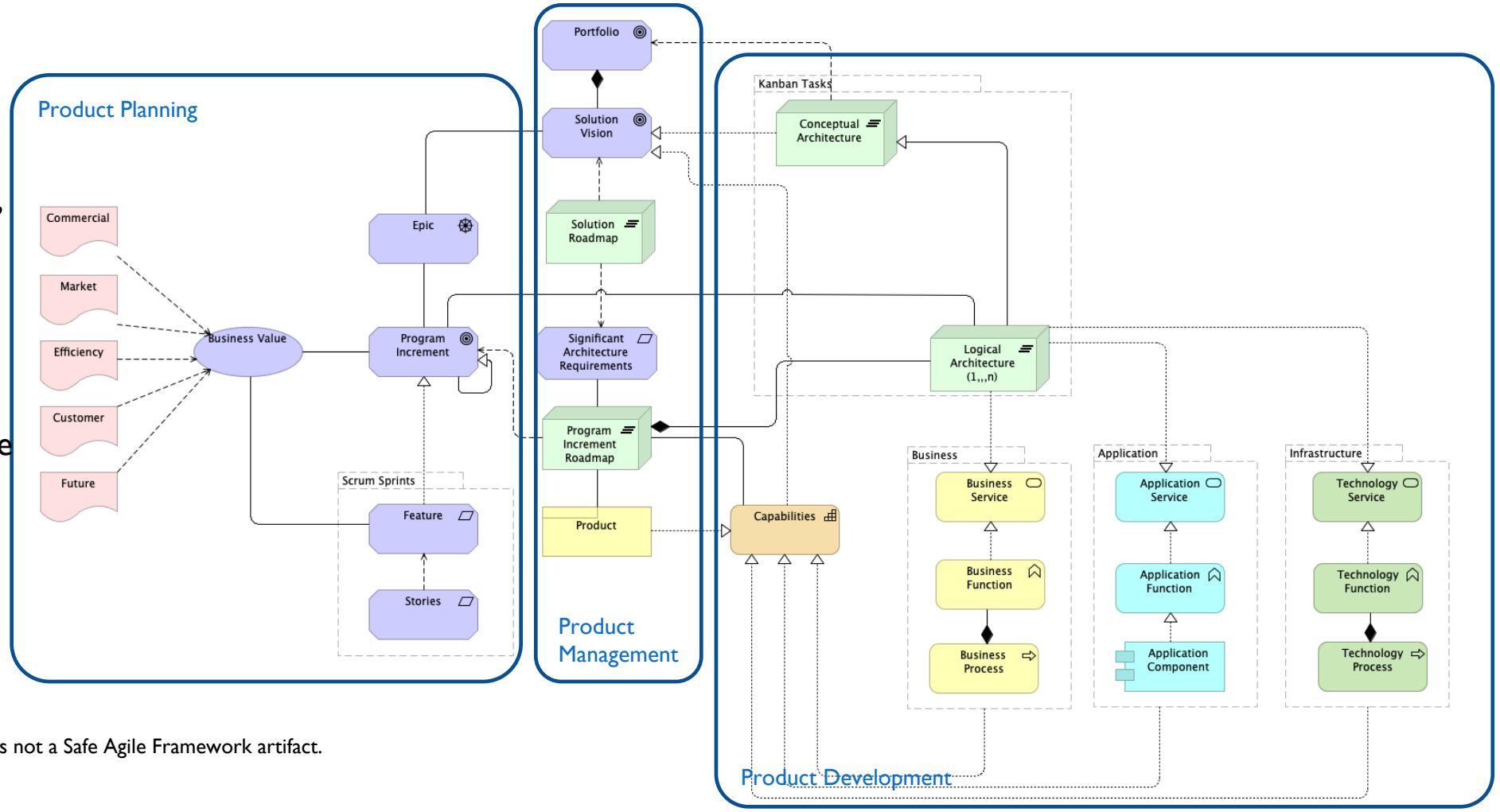
# AGILE ARCHITECTURE - METAMODEL OF DEVELOPMENT PROCESS

- Agile development is an iterative process that includes Product Planning, Product Management and Product Development
- Architecture is critical to providing the appropriate guidance, approach and delivery at the appropriate times within the product development lifecycle process




**Note:** The Agile Architecture Metamodel is not a Safe Agile Framework artifact.



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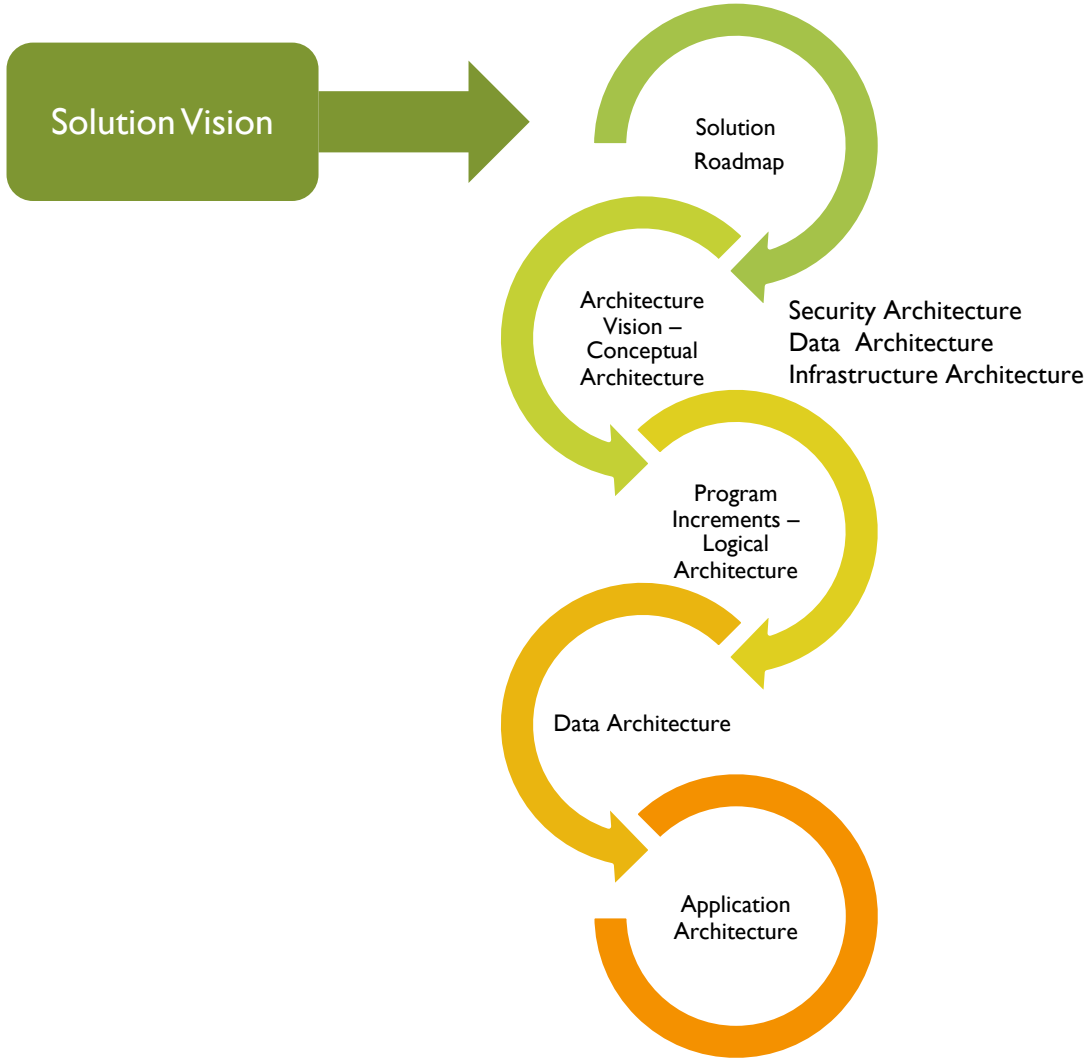
# INITIAL IMPLEMENTATION OF A NEW PRODUCT

- A Product goes through an Initiation phase that includes a Solution Vision and other agile artifacts
- The Solution Vision leads to a Program Increment Roadmap that outlines Significant Architecture Requirements that need to be delivered
- The Architecture Vision is the translation of the Solution Roadmap, Program Increment Roadmap and the Significant Architecture Requirements
- Architecture processes do not change in an agile approach from those used in a waterfall approach
- Architecture processes are performed in increments driven by the delivery of Significant Architecture Requirements



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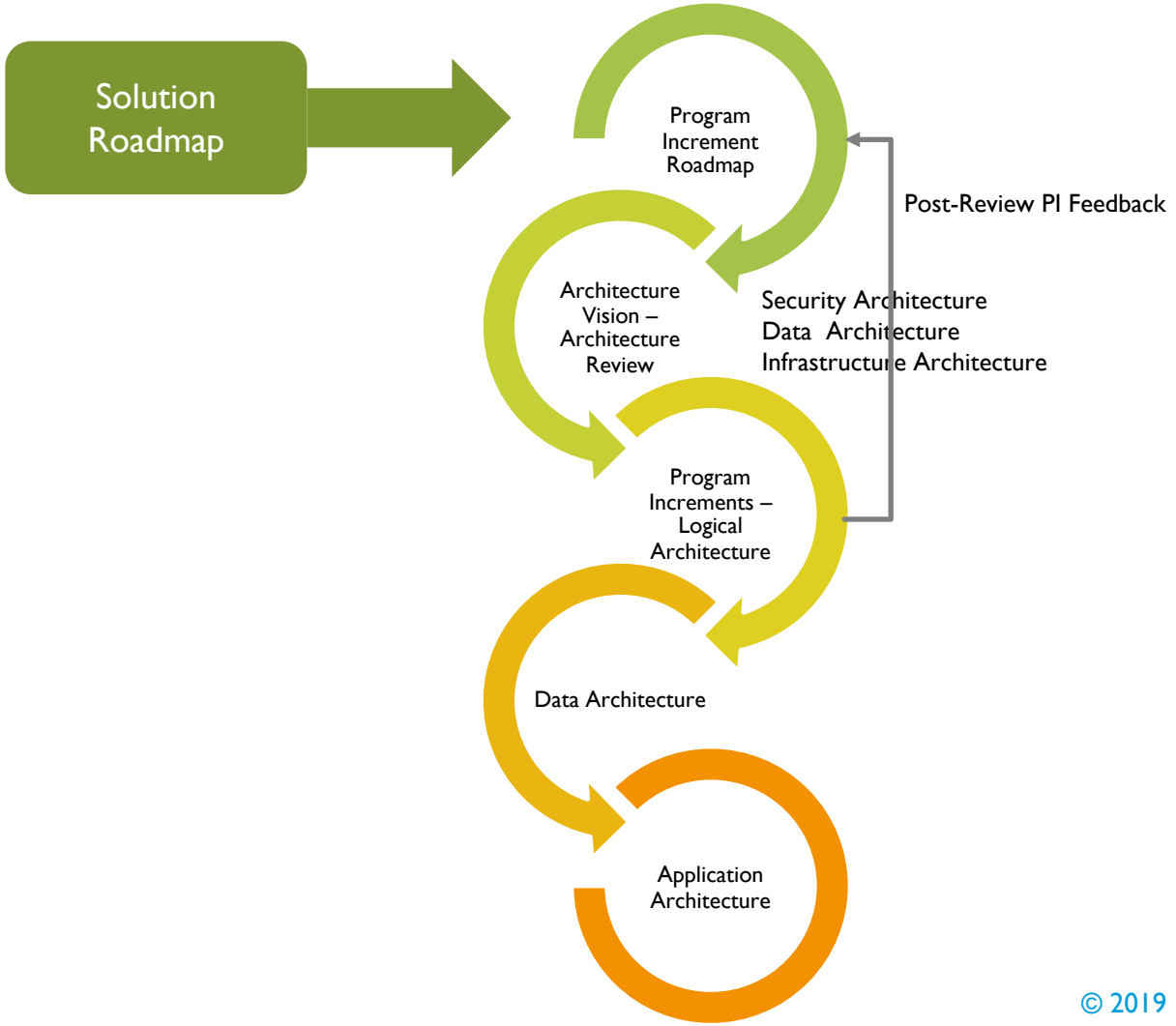
# ONGOING PRODUCT DEVELOPMENT IN AGILE

- A Product continues to be developed and is delivered through Program Increments
- The Program Increment Roadmap is a decomposition of the Solution Roadmap broken down in Program Increments
- The goal of Program Increments and the building of Product capabilities is to deliver Business Value
- There are Significant Architecture Requirements that may be associated with the Program Increment Roadmap based on the Conceptual Architecture developed as part of the Product Initiation phase
- Significant Architecture Requirements are documented through the definition of a Logical Architecture and User Stories or Tasks across Sprints



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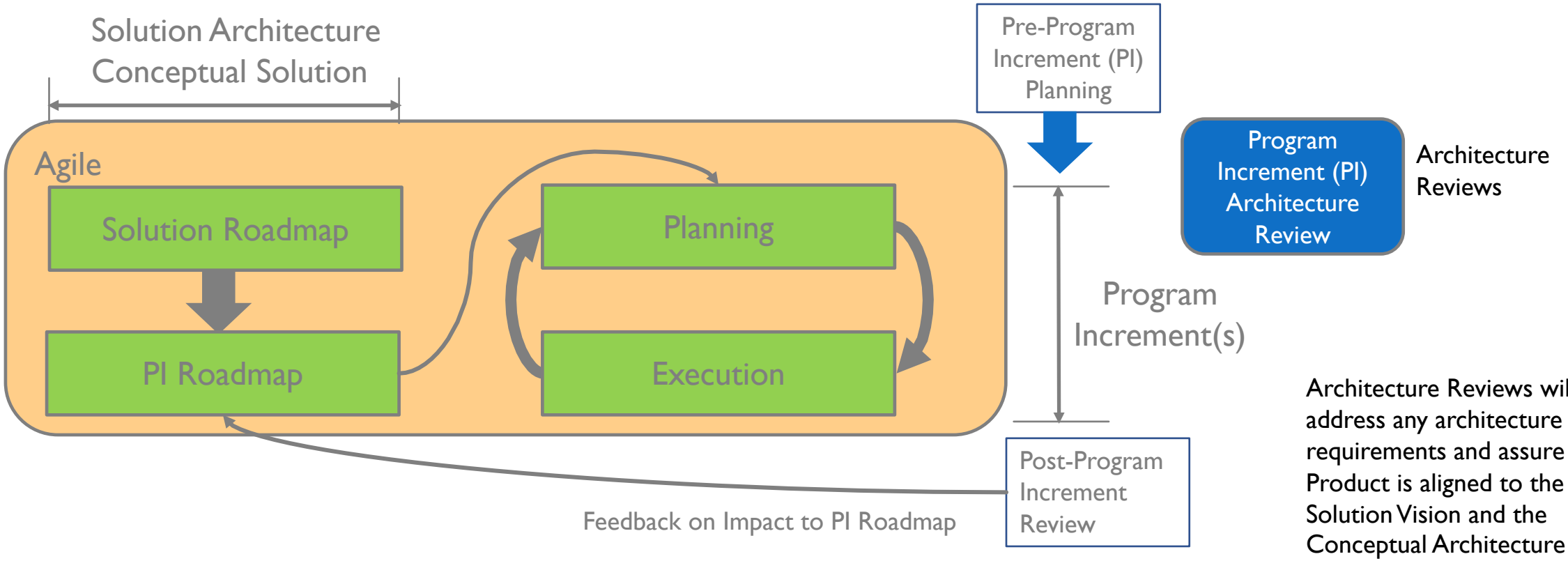
# AGILE METHODOLOGY – MANAGING THE PROCESS




Architecture Reviews will address any architecture requirements and assure that the Product is aligned to the Solution Vision and the Conceptual Architecture



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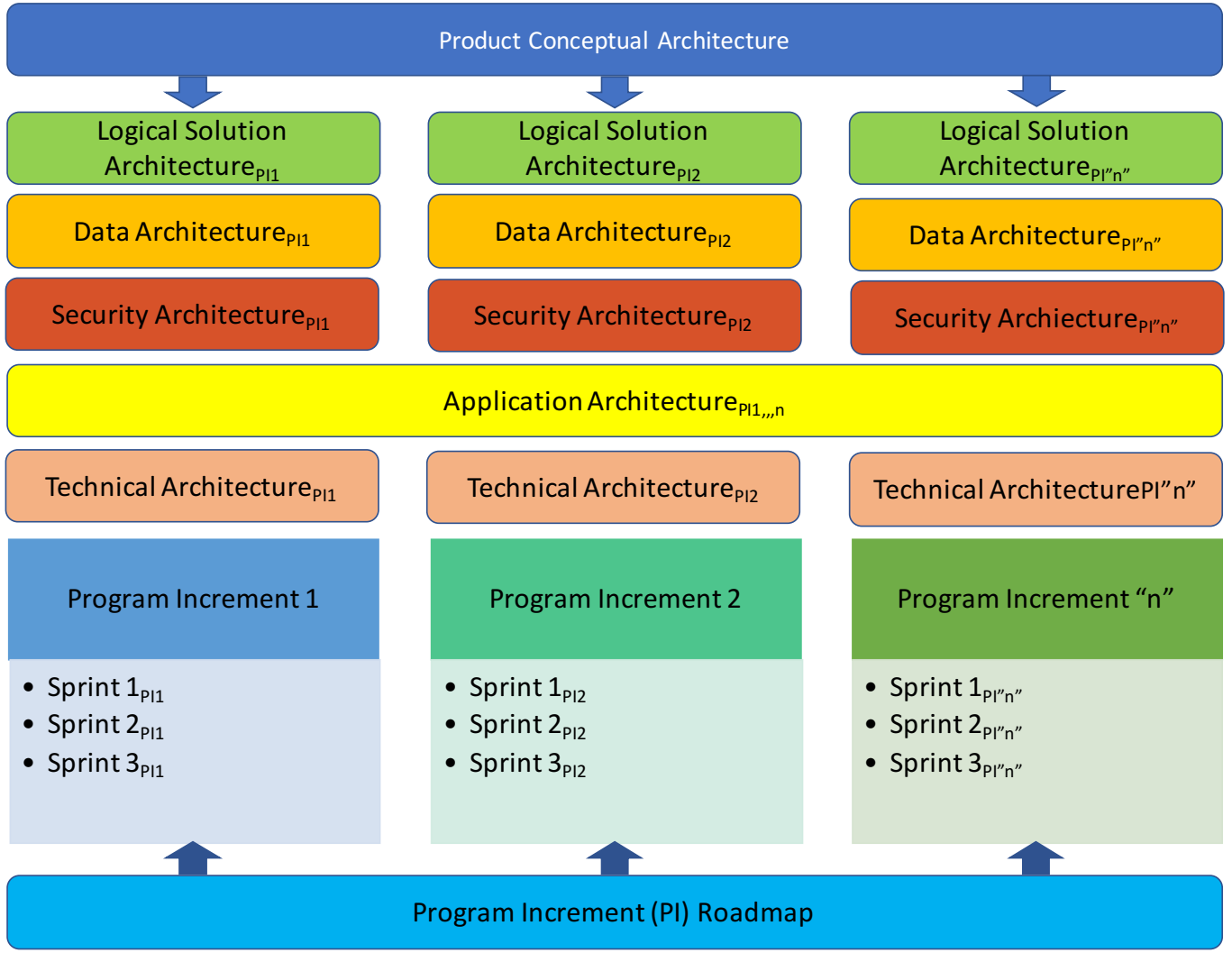
# SOLUTION ROADMAP, ARCHITECTURE AND AGILE DEVELOPMENT

- Application Architecture will be engaged throughout the Product development process
- Solution, Data, Security and Technical Architecture will be engaged at the appropriate times as defined by the Program Increment (PI) Roadmap



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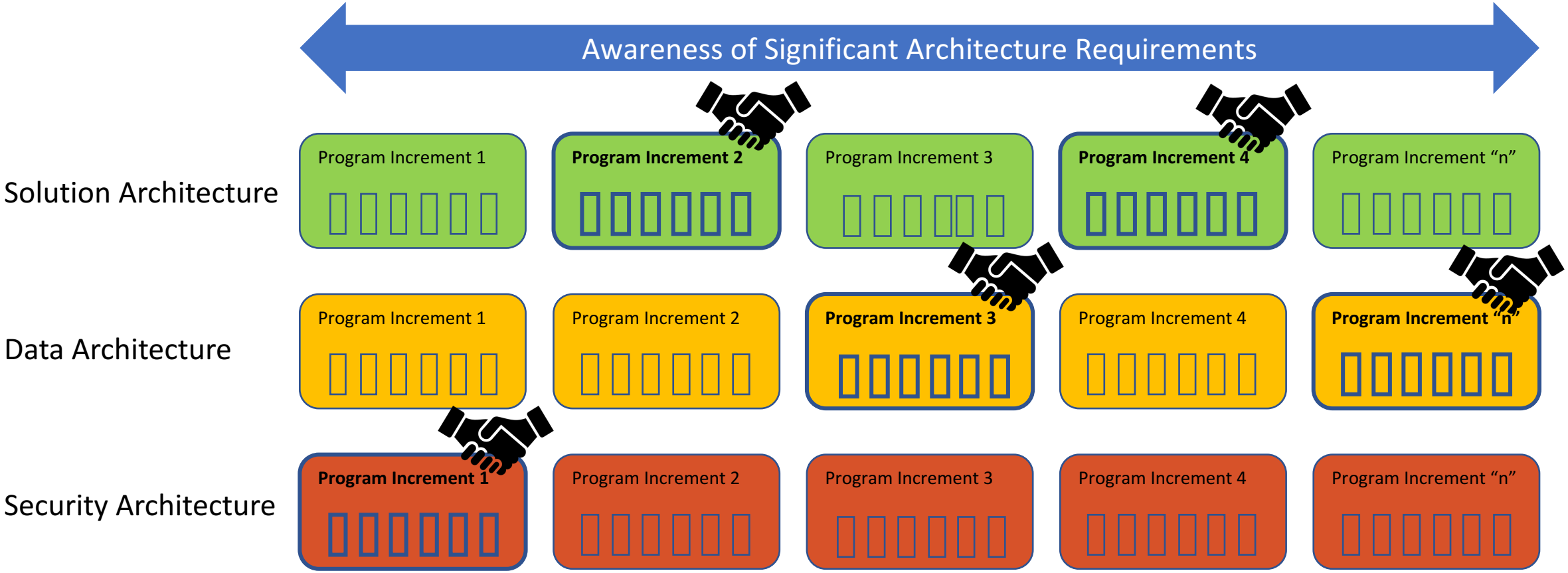
# PROGRAM INCREMENTS AND SPRINTS – SLOTTING OF SIGNIFICANT ARCHITECTURE WORK




Note: The Product Roadmap helps to determine the slotting of architectural work that needs to be done and the subsequent build (which could take one or more Program Increment's).

Note: Bold items indicate the timing of architecture deliverables. Non-bold items indicate Sprint reviews but no architecture work is required. All Program Increments go through a pre-PI review of which there may or may not be significant architectural work to be done.



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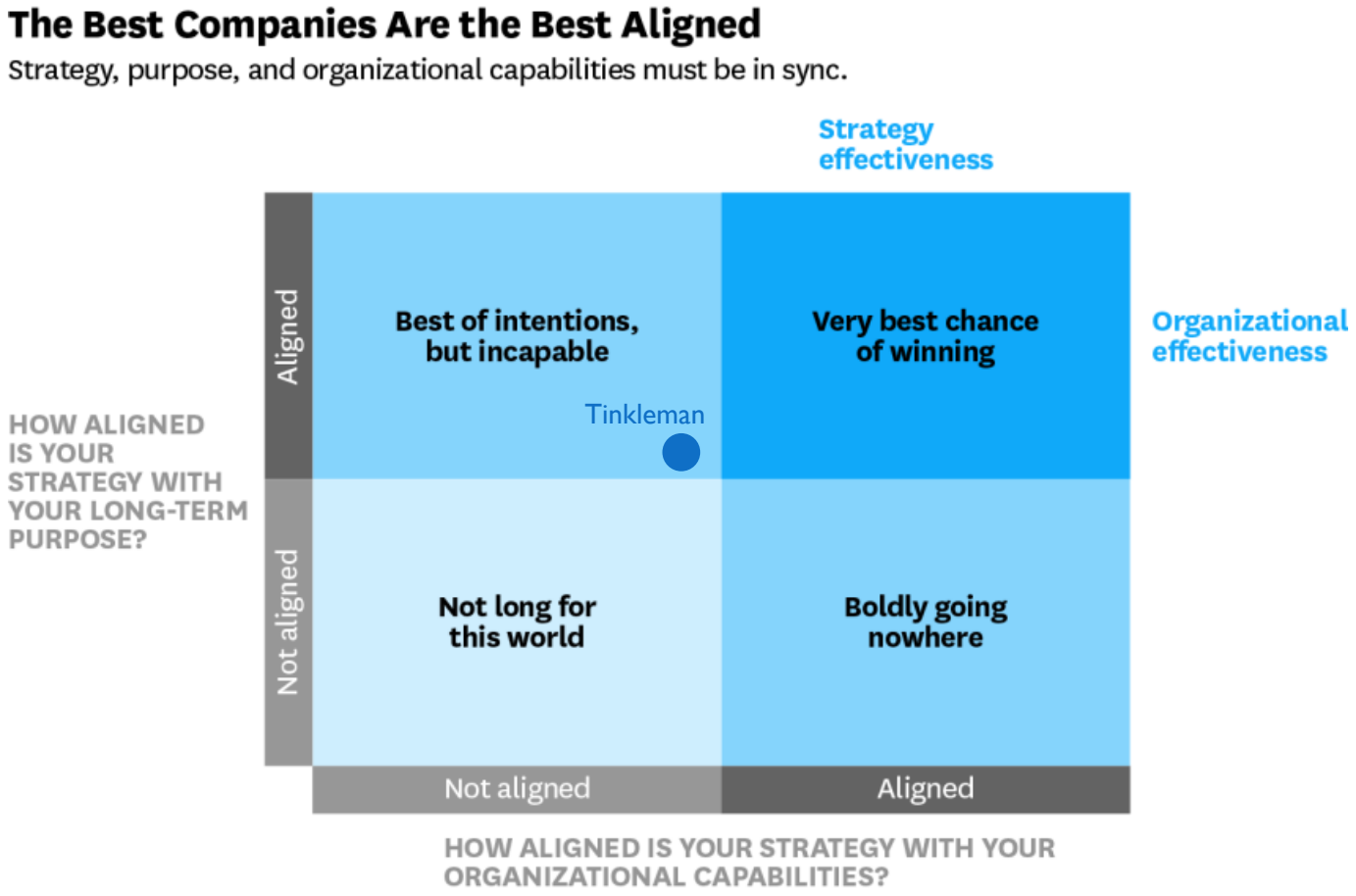
# TINKLEMAN ARCHITECTURE LAB 2

# WORKSHOP: STRATEGY & ALIGNMENT

- Tinkleman has embarked on a journey to give them the best chance to succeed
- They are not positioned in the upper right quadrant because they are early in their journey to be innovative from a product and process perspective
- Tinkleman executives went through a consultant engagement program in 2017 to introduce innovation through an Innovation Strategy development process
- Since time to market has always been an issue, the CIO has invested in educating his architecture team in Agile Development
- They are on a journey and they are becoming more aligned but operationally they need to start delivering capabilities faster to support the Business and Innovation strategies




https://hbr.org/2016/05/a-simple-way-to-test-your-companys-strategic-alignment



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# WORKSHOP INNOVATION STRATEGY - NETWORK

- Network
  - Network innovations provide a way for businesses to take advantage of other companies' processes, technologies, offerings, channels and brands. A company can capitalize on its own strengths while making use of the capabilities and assets of others
  - Potential Network Innovations
    - Does the company work with other firms or collaborators to develop new offerings that drive a shift from business as usual?
    - Or, does the company enable the offerings of other players by lending them its channels, processes, brand or other unique assets?
    - Has the company formed any unusual partnerships such as ones that seem unrelated to its current business or with competitors?
    - Does the company collaborate with its suppliers and/or customers to develop, test or market new products?
  - Example Company
    - UPS and Toshiba – UPS technicians from the logistics arm repair broken Toshiba laptops at UPS shipping hubs
  - Workshop
    - Tinkleman has partnered with a Gaming provider in order to get into the Gaming market
    - They successfully acquired customers for gaming through sales of their devices
    - Tinkleman would like to have a closer relationship with the Provider but was not able to capture all of the user interactions because of the lack of a Data Warehouse capability
    - Tinkleman sees the expansion of this part of the market as key to their growth and expects to provide better profile and interaction information to their Partner to develop gaming options that take advantage of the technical capabilities of their gaming devices

# WORKSHOP INNOVATION STRATEGY – PRODUCT SYSTEM

- Product System
  - Product System innovations are rooted in how individual products and services connect or bundle together to create a robust and scalable system. This might be fostered through interoperability, modularity, integration or other ways of creating valuable connections between otherwise distinct and disparate offerings. Product bundling is a common example of Product System innovation.
  - Potential Product System Innovations
    - Does the company make multiple products that connect with one another in unique ways?
    - Are other players creating products that interface with the company's offerings or depend on them to function?
    - Does the company offer distinct products and services that can also be interfaced or purchased as packages?
  - Example Company
    - Microsoft – MS Office was the result of bundling their individual products into an integrated system of products
  - Workshop
    - Tinkleman has partnered with a Gaming provider in order to get into the Gaming market
    - They successfully acquired customers for gaming through sales of their devices but the gaming products do not take advantage of their superior features and functions gaming devices
    - Tinkleman would like to have a closer relationship with the Provider but was not able to capture all of the user interactions because of the lack of a Data Warehouse capability
    - Tinkleman wants to differentiate their gaming devices from their competitor's by offering more gaming content that takes advantage of the superior features and functions of their gaming devices

# SOLUTION VISION

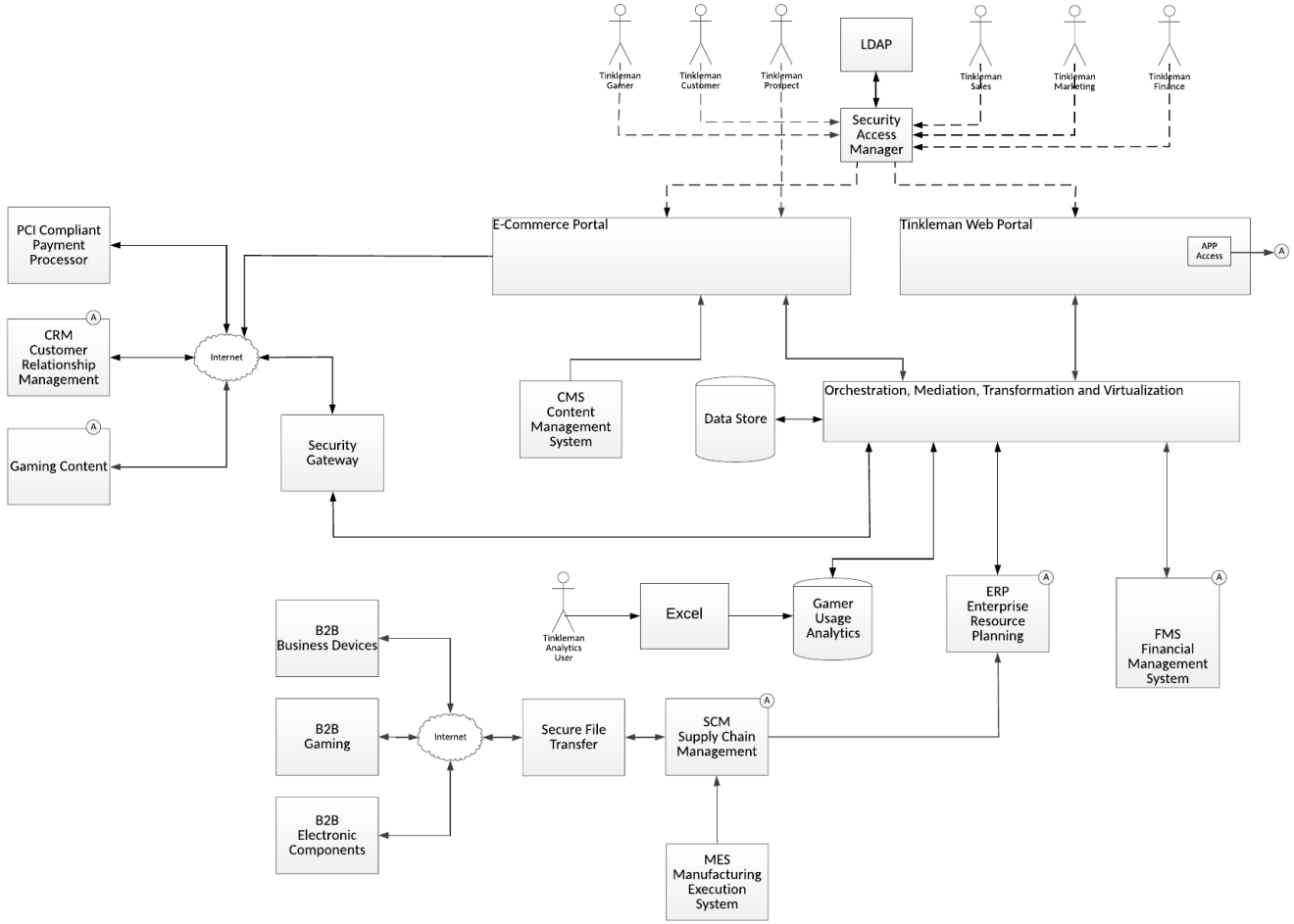
- Solution Vision (Customer Analytics Product)
  - What will this new solution do?
    - The Customer Analytics product will collect information from gamers using both Tinkleman and non-Tinkleman devices leveraging our partner's current online gaming platform.
  - What problems will it solve?
    - At present, Tinkleman only knows who buys their controllers if they register the product. By partnering with the gaming partner, and linking their information with Tinkleman's CRM data, we will begin to get a richer view into who is using the controllers, with which games, and with what levels of success.
  - What features and benefits will it provide?
    - The Customer Analytics product will provide Tinkleman and its gaming partner with near-real-time data into the popularity of specific controllers with specific games, how successful gamers using those products are within the games, and where opportunities exist to provide gamers with non-Tinkleman controllers some advantages if they switch controllers

# AFTERNOON LAB DOCUMENTS

- Workshop innovation strategy
- Tinkleman Case Study
- Tinkleman current state diagram
- Tinkleman target state diagram
- Tinkleman conceptual data model
- Program Increment Roadmap

- Workshop Goal
  - Identifying significant architecture requirements across four Program Increments based on the Program Increment Roadmap

# TINKLEMAN CURRENT STATE - 2019



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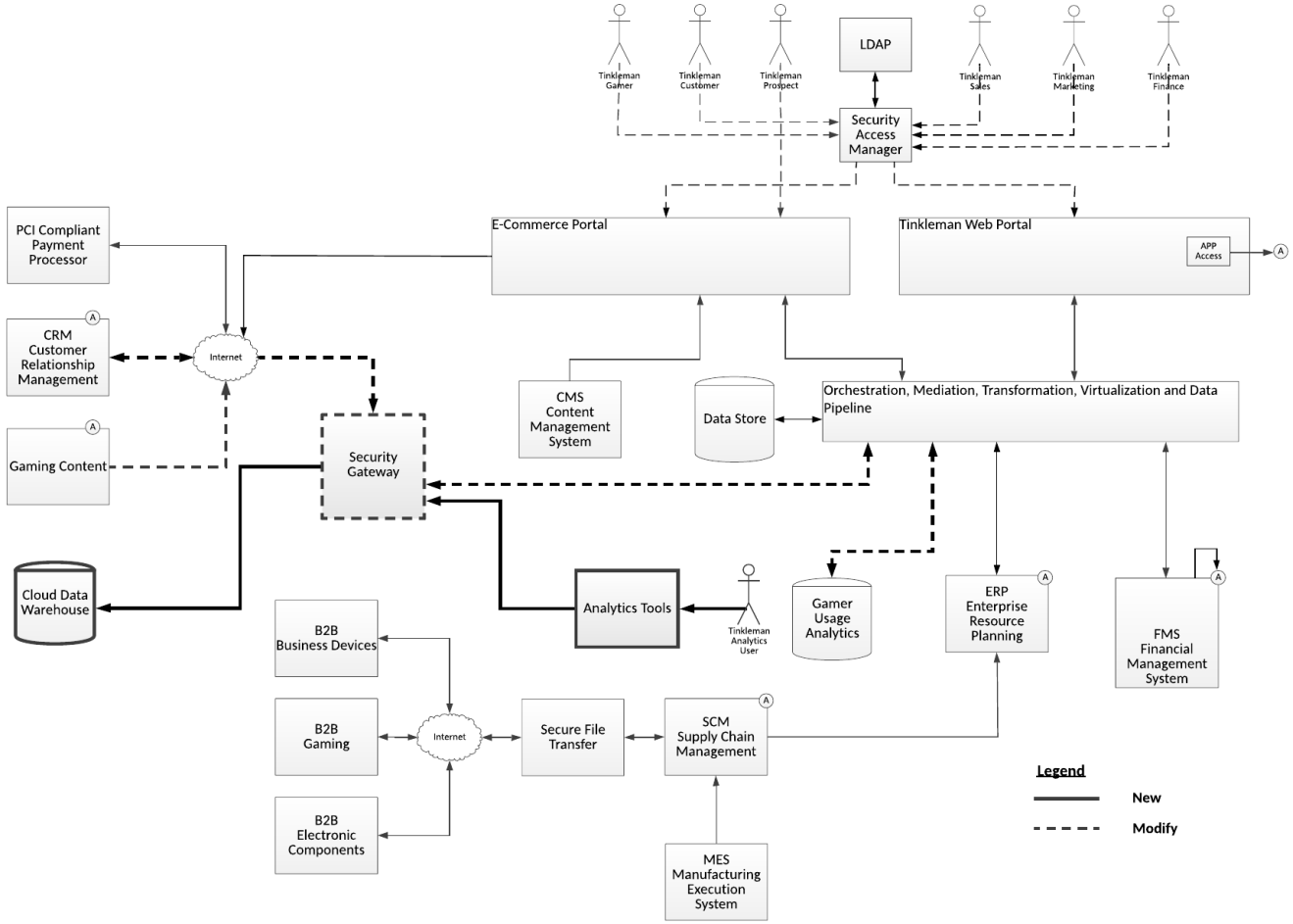
# TINKLEMAN TARGET STATE - 2019



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# GAME KPI'S – INITIAL DATA CAPTURE (PI-1)

- General Application KPI's
  - Installations – by game
  - Uninstallations – by game
  - Registrations – by game
  - Subscriptions – by game
  - Crashes – by game
  - User Growth Rate – by game

These KPI's were collected during the first year of offering the gaming content. Metrics were stored in the Gamer Usage Analytics data store. Analytics were limited to accessing data in the data store and using Excel to analyze the data.

# GAME KPI'S – DETAILED DATA CAPTURE (PI-2)

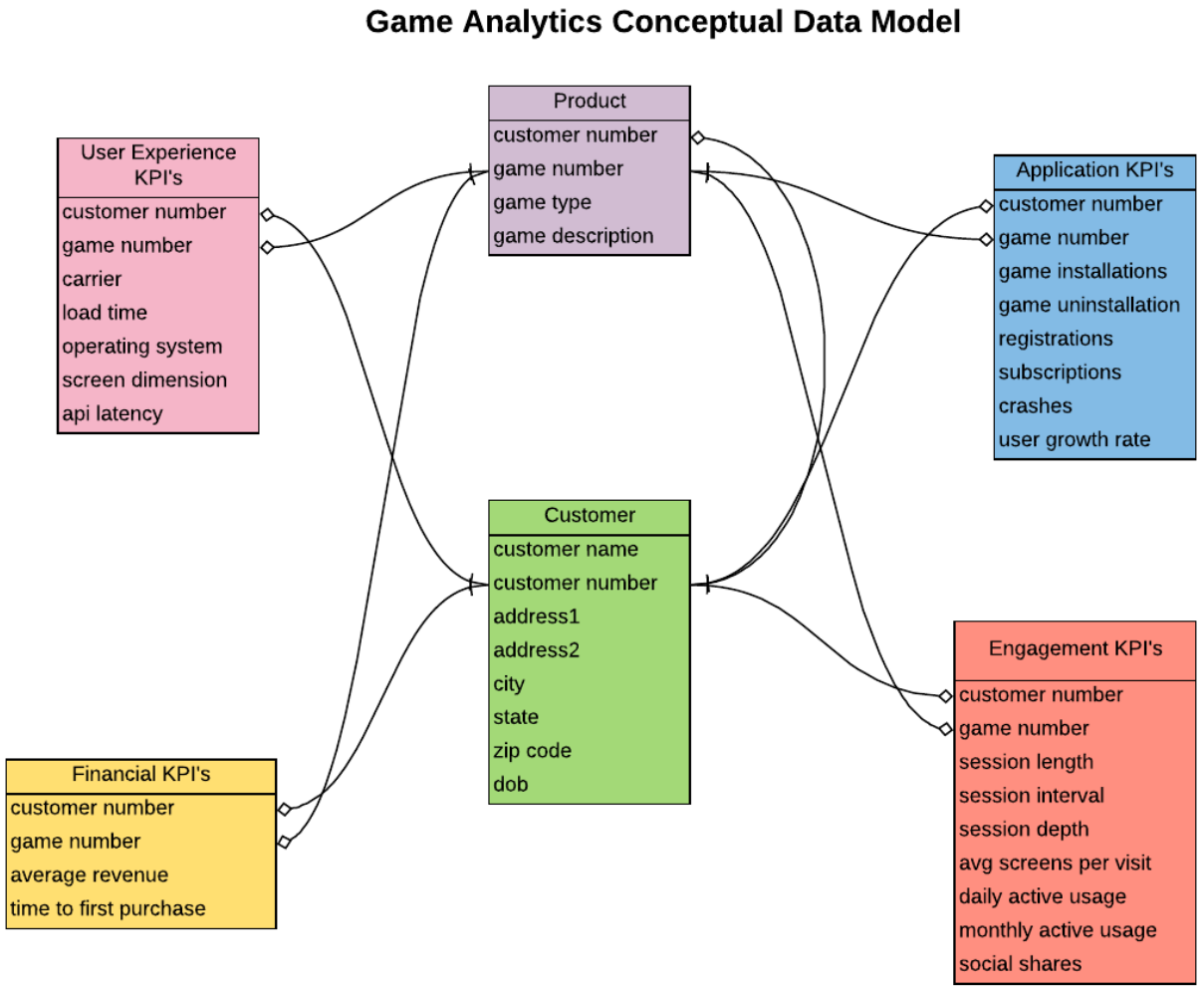
- Engagement KPI's
  - Session Length – aggregate and individual by game
  - Session Interval – aggregate and individual by game
  - Session Depth – aggregate and individual by game
  - Average Screens Per Visit – aggregate and individual by game
  - Daily Active Users – by game
  - Monthly Active Users – by game
  - Social Shares – by Subscriber
  - Brand Awareness
  - Churn Rate

# GAME KPI'S – DETAILED DATA CAPTURE (PI-3)

- Financial KPI's
  - Average Revenue Per User – aggregate and individual by game
  - Time to First Purchase – aggregate and individual by game
  - Purchases – individual by game
- User Experience KPI's
  - Load Time – aggregate and individual by game
  - Carriers – aggregate and individual by carrier
  - OS – aggregate and individual by customer
  - Screen Dimension/Resolution- aggregate and individual by game
  - API Latency – daily demand profile for individual game API's

# GAME ANALYTICS CONCEPTUAL DATA MODEL

- Conceptual Data Model for game analytics
- Logical Data Models would be developed for those PI's where additional data architecture requirements are driven by Logical Architecture development aligned to the Solution and Program Increment Roadmaps



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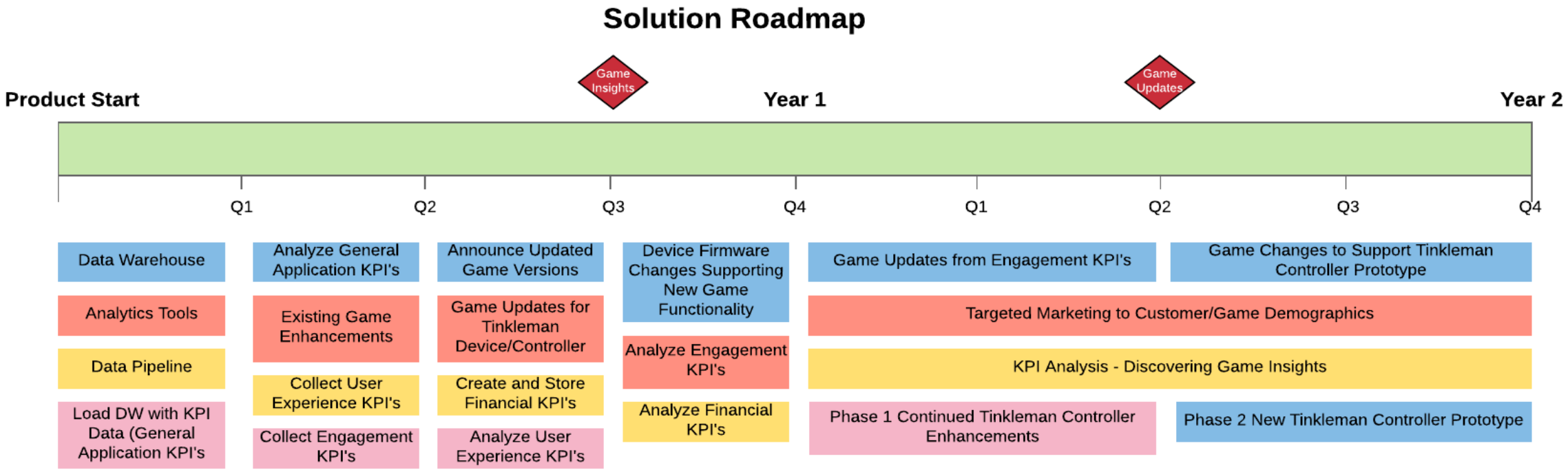
# BUSINESS VALUE DELIVERY

- Commercial – Functionality or work that translates into profit directly[11]
- Market – Increases the potential number of customers
- Efficiency – Increases organizational efficiency and thereby decreases operating costs
- Customer – Increases the likelihood that customers will continue to use your product
- Future – Increases the chances of more easily achieving one of the values above in the near future by investing in innovation and learning now

Verwijs, C., "What is this thing called (Business) Value?", The Liberators, https://medium.com/the-liberators/what-is-this-thing-called-business-value-3b88b734d5a9, February, 2014

# SOLUTION ROADMAP



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# PI ROADMAP – VALUE DELIVERY

| PI-1 | PI-2 | PI-3 | PI-4 |
|---|---|---|---|
| **Business Value**<br>**1. Future Value** | **Business Value**<br>**1. Future Value** | **Business Value**<br>**1. Customer Value**<br>**2. Market Value**<br>**3. Future Value** | **Business Value**<br>**1. Customer Value**<br>**2. Future Value** |
| **Cloud Data Warehouse Implementation Goals** | **Gaming Analytics Goals** | **New Game Versions Goals** | **Enhanced Game Functionality Goals** |
| Cloud data warehouse vendor chosen and warehouse operational | Analysis of General Application KPI's (from Gamer Usage Analytics data store captured from initial game usage statistics) | Introduction of game versions that take advantage of the Tinkleman device/controller | Enhanced game functionality for the three most often accessed and played games based on analytics information |
| Analytics tool chosen and tool operational | New insights into additional gaming content | Gaming content incremental functionality based on analytics information | Analyze Engagement KPI's |
| Data pipeline implemented to update Gamer Usage Analytics (General Application KPI's) | Joint product discussions with gaming partner on gaming product insights and development | Greater insight into customer gaming metrics as additional data is captured | Analyze Financial KPI's |
| Gamer usage analytics ingested into data warehouse through data pipeline<br>• All data collected in Gamer Usage Analytics data store<br>• Daily data updates received from Gaming partner | Collect Engagement KPI's (Stage) | Create and store Financial KPI's | |
| | Collect User Experience KPI's (Stage) | Analyze User Experience KPI's | |

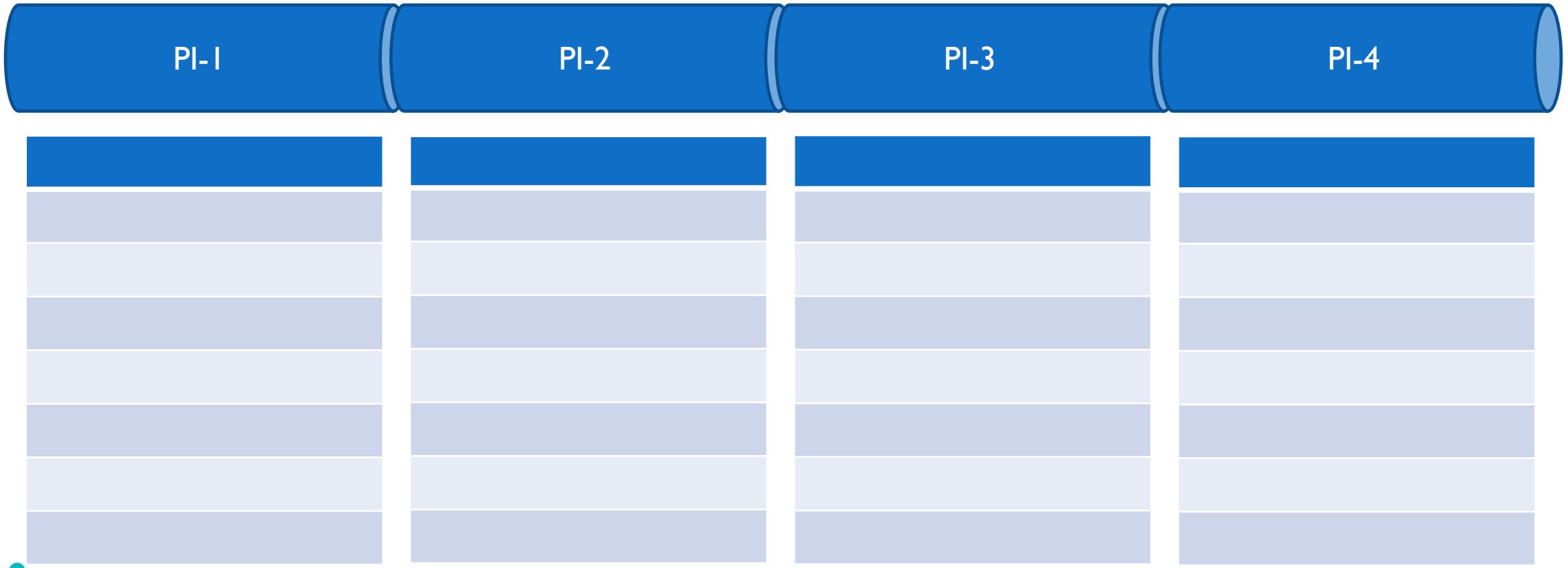
# PI ROADMAP – SIGNIFICANT ARCHITECTURE REQUIREMENTS

**Business Value**
1. Future Value

**Business Value**
1. Future Value

**Business Value**
1. Customer Value
2. Market Value
3. Future Value

**Business Value**
1. Customer Value
2. Future Value



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# ARCHITECTURE ACTIVITIES – PI-1 THROUGH PI-4

2

Data Warehouse Logical Solution
- Cloud Data Warehouse
- Analytics Tools
- Data Migration from Game Usage Analytics Data Store
- Data Pipeline

4

Data Warehouse Logical Data Model
- Engagement KPI's
- User Experience KPI's

6

Data Warehouse Logical Data Model
- General Application KPI's

8

Application
- Data Pipeline implementation to ingest Customer Relationship data and Financial Management System data for Financial KPI information
- Data Pipeline implementation to ingest and store User Experience KPI's

1

Data Warehouse Logical Data Model
- Financial KPI's

9

Security
- Cloud Data Warehouse security
- Analytic Tool RBAC

5

Infrastructure
- Data Pipeline Technology

3

There are no Significant Architecture Requirements that need to be addressed

10

Application
- Data Pipeline implementation to ingest and store Engagement KPI's from Gaming Content provider to Cloud Data Warehouse

7

Application
- Data Migration Design
- Data Pipeline Implementation

# PI ROADMAP – SIGNIFICANT ARCHITECTURE REQUIREMENTS

**Business Value**
1. **Future Value**

**Business Value**
1. **Future Value**

**Business Value**
1. **Customer Value**
2. **Market Value**
3. **Future Value**

**Business Value**
1. **Customer Value**
2. **Future Value**

PI-1 | PI-2 | PI-3 | PI-4

### Cloud Data Warehouse Implementation Architecture

Data Warehouse Logical Solution
- Cloud Data Warehouse
- Analytics Tools
- Data Migration from Game Usage Analytics Data Store
- Data Pipeline

2

Data Warehouse Logical Data Model
- General Application KPI's

6

Application
- Data Migration Design
- Data Pipeline Implementation

7

Infrastructure
- Data Pipeline infrastructure

5

Security
- Cloud Data Warehouse security
- Analytic Tool RBAC

9

### Gaming Analytics Architecture

Data Warehouse Logical Data Model
- Engagement KPI's
- User Experience KPI's

4

Application
- Data Pipeline implementation to ingest and store Engagement KPI's from Gaming Content provider to Cloud Data Warehouse

10

### New Game Versions Architecture

Data Warehouse Logical Data Model
- Financial KPI's

1

Application
- Data Pipeline implementation to ingest Customer Relationship data and Financial Management System data for Financial KPI information
- Data Pipeline implementation to ingest and store User Experience KPI's

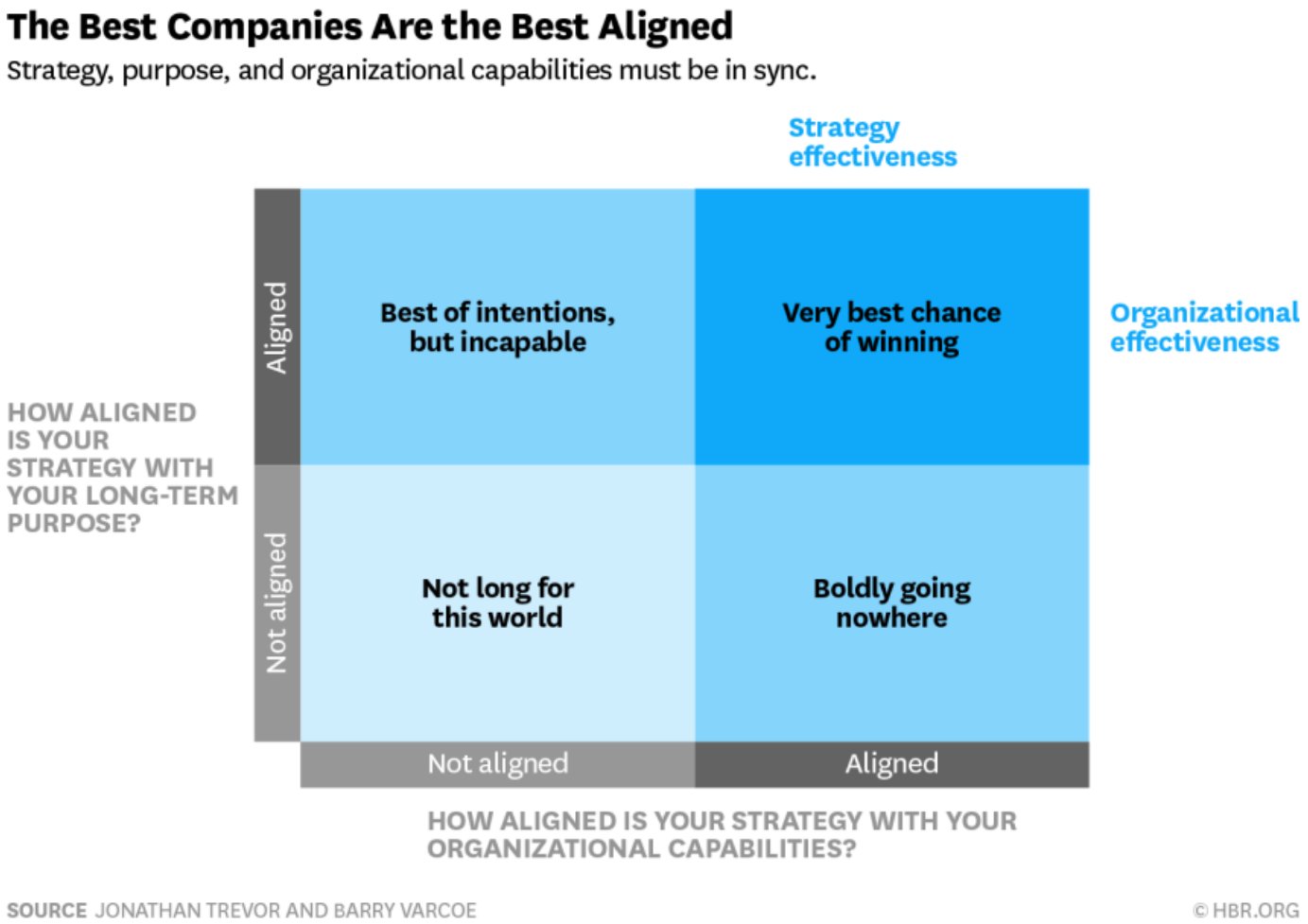
8

### Enhanced Game Functionality

There are no Significant Architecture Requirements that need to be addressed

3

# HOW ALIGNED IS YOUR STRATEGY?




https://hbr.org/2016/05/a-simple-way-to-test-your-companys-strategic-alignment



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# WHAT IS "THE TECHNOLOGY FALLACY?"

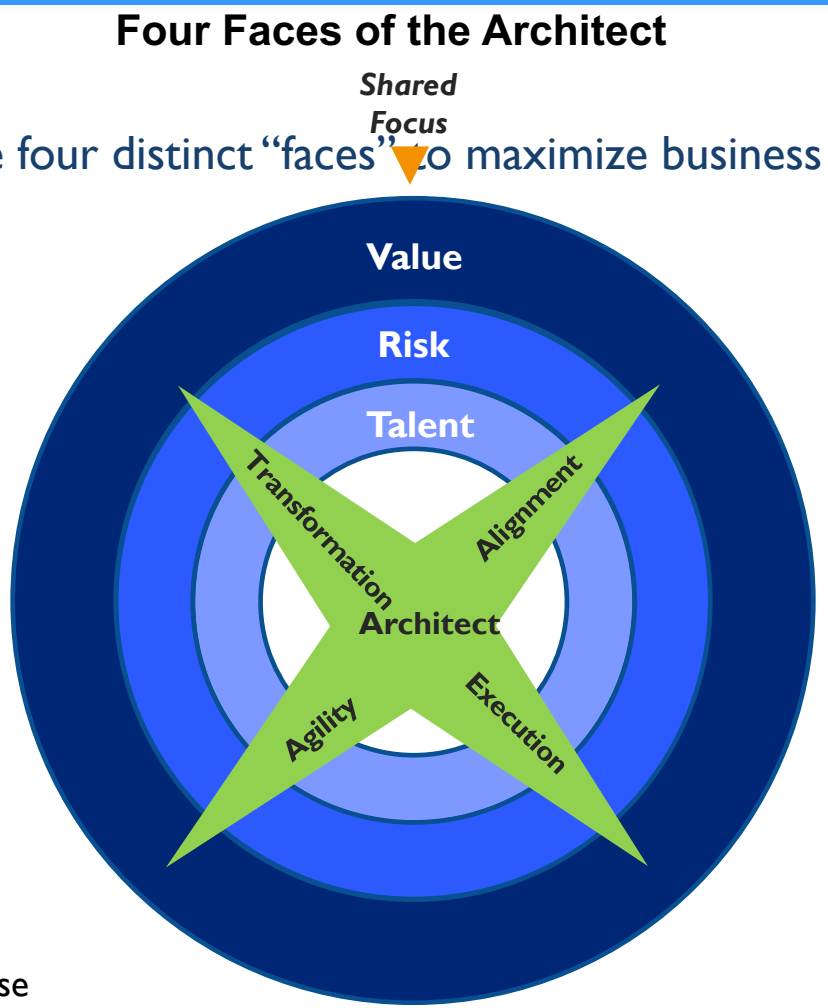
- The mistaken belief that just because business challenges are *caused* by technology, that they also need to be *solved* by technology.

# THE FOUR FACES OF THE ARCHITECT

Architects are required to embrace four distinct "faces" to maximize business value delivered to the enterprise.

## CATALYST

Instigate innovation through transformational change to business architecture strategy, operations and technology.




## STRATEGIST

Partner with the business to align business and IT strategies and maximize the value of technology investments.

## TECHNOLOGIST

Assess technologies and design technical architectures to increase business agility and manage complexity.

## OPERATOR

Operate and deliver efficient IT services and solutions to support the business while managing risk and protecting core assets.

# THE ARCHITECT AS "OPERATOR" ENSURES IT SERVICES AND SOLUTIONS ARE DELIVERED RELIABLY AND COST-EFFECTIVELY

Operate and deliver efficient IT services and solutions to support the business while managing risk and protecting core assets

**Objectives**

- Performance Targets Achieved
- Cost-Competitive Services
- Secure IT Assets

**Primary Capabilities**

- Solution Delivery
- Service Mgmt.
- Regulatory Compliance
- Security & Controls
- Service Level Mgmt.
- Business Continuity/ DR
- Operational Performance Mgmt.
- 3rd Party Mgmt.

The Architect as "operator" ensures the IT engine is running efficiently, effectively and securely 24x7 to deliver IT services and solutions. Operators establish service level agreements with customers and ensure delivery at required levels. Performance objectives focus on operational and financial targets. Operators maintain robust IT cost models and provide chargebacks that support business decision-making. In addition, operators establish and govern strategic third-party relationships (technology, services and staff suppliers).

*Issues Addressed by the Operator*

- How effective is our IT operating model in delivering IT services/solutions?
- How secure are IT assets?
- Are we meeting service level objectives?
- How does our performance compare against outside providers and other organizations?
- Do we have the right 3rd party partnerships and are we managing them effectively?
- How quickly are we providing solutions to business needs?

Typical Performance Metrics

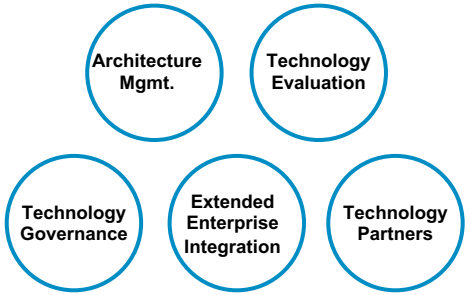
- Percentage of SLA objectives met
- Cost per service
- Level of satisfaction with IT services
- Percentage of programs delivered on time, within budget, and with expected quality

# THE ARCHITECT AS "TECHNOLOGIST" SEEKS TO MAXIMIZE THE VALUE OF IT INVESTMENTS

Assess technologies and design technical architectures to increase business agility and manage complexity

**Objectives**


**Primary Capabilities**




The Architect as "technologist" creates technical architectures that underpin the business architecture. Technologists carefully select platforms and standards that are robust and endure over time. These architectures support changing service delivery models and integrate services delivered by external sources into a seamless framework. Technologists ensure architecture designs are flexible and extendable to meet future business needs. Technologist lead standardization (data, applications, infrastructure) wherever feasible to allow greater agility and manage cost. Technologists assess technologies that can potentially add value to the organization and manage an R&D process that tests technical feasibility.

*Issues Addressed by the Technologist*

- Will the technical architectures support the business architecture and future needs of the business? Are they agile and extendible?
- Do we have the right technical standards and adherence to them?
- How should we manage growing complexity? Where should we increase standardization?
- What technologies should we be evaluating?
- What R&D pilots should we undertake?

*Typical Performance Metrics*

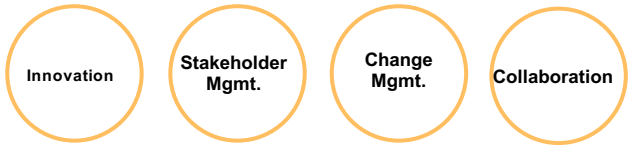
- Percentage of successful technology assessment pilots
- Number of different technologies (per technology platform)
- Number of "technical standards" exceptions

# THE ARCHITECT AS "CATALYST" FACILITATES TRANSFORMATIONAL CHANGE

Instigate innovation through transformational change to business architecture, strategy, operations and technology

**Objectives**


**Primary Capabilities**




The Architect as "catalyst" has enterprise-wide perspective and credibility as a large-scale change agent. The catalyst understands where the organization needs to transform and creates a future state vision and a strategic roadmap to achieve the target state. Catalysts possess significant political capital and are able to enlist and align executive stakeholders. Catalysts' relentless focus on disruptive innovation and cross-functional teaming allows them to lead transformational change in the IT function and across the business areas. They do so through IT-enabled business programs for processes reengineering, new products/services, and operating model restructuring.

*Issues Addressed by the Catalyst*

- What are the top innovation opportunities?
- What is the case for change and how do we secure sponsorship from core stakeholders ?
- What is the organization's capacity and ability to absorb major change?
- How do we get the organization ready for major change?
- How well are we enabling business innovation?

*Typical Performance Metrics*

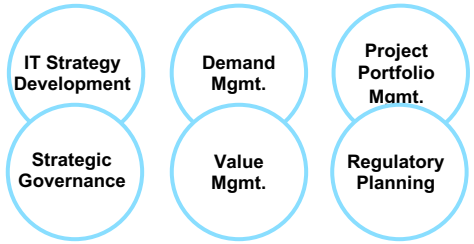
- ROIC of investments in IT-enabled innovation
- Percentage of company revenue/profit coming from IT-enabled innovations
- Innovation cycle time from concept to implementation

# THE ARCHITECT AS "STRATEGIST" GUIDES THE DESIGN, DEVELOPMENT AND DEPLOYMENT OF EFFECTIVE TECHNICAL ARCHITECTURES

Partner with the business to align business and IT strategies and maximize the value of technology investments

**Objectives**


**Primary Capabilities**




The Architect as "strategist" is the chief value architect for all IT investments. The strategist partners with business leaders to align business and technology investments to maximize value. The strategist possesses deep business knowledge and acts as a credible partner in providing "business-centric" advice on how technology can enhance business capabilities. The strategist institutes strategic governance that prioritizes IT investments and ensures IT and business resources/budgets are fully aligned to execute the priorities of the organization and deliver expected results.

*Issues Addressed by the Strategist*

- How well is IT aligned with the business agenda?
- What progress are we making against the organization's operational, financial and strategic objectives?
- Are we maximizing the business value of the IT investment portfolio?
- Are the IT resources and budgets aligned with the business priorities?
- Are programs structured for success?
- Do we have the competencies needed to be successful?

*Typical Performance Metrics*

- Percentage of strategic objectives being met
- ROIC for IT investment portfolio
- Percentage of projects managed by governance process
- Operational and financial goals achieved vs. plan



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# HOW DO YOU SPEND YOUR TIME?

Using percentages adding up to 100%, identify the percentage of time you spend (on average) in each of these roles. Then identify how you would ideally spend your time.

What changes would you have to make to get to your ideal?

| | Today - % | Ideally - % |
|---|---|---|
| Operator | | |
| Technologist | | |
| Catalyst | | |
| Strategist | | |
| | | |



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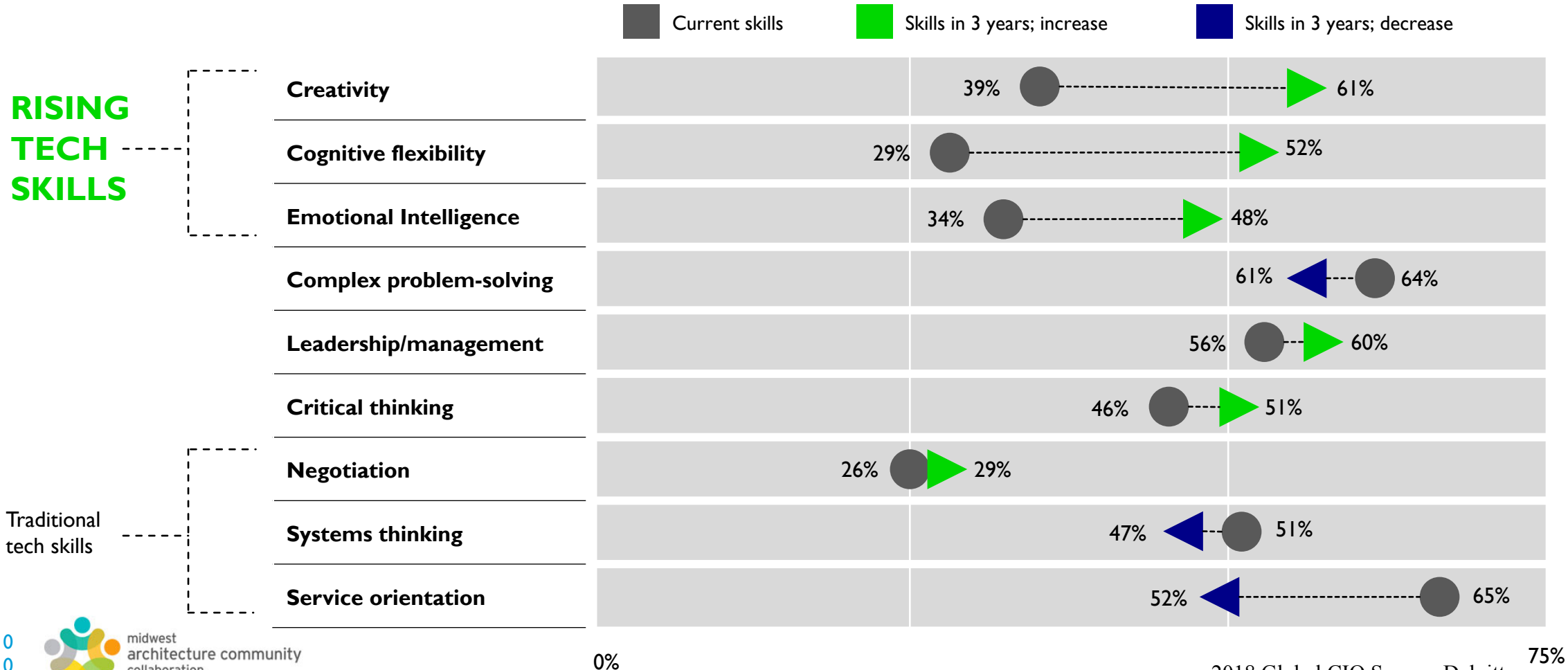
# Talent, Culture and Organization

> “To reinvent our organization through technology, we need to ensure that our culture enables and promotes the reinvention of our IT talent as people and professionals. Otherwise we cannot transform.”

- Reginaldo Pereira Da Silva
IT Director, Thermo Fisher Scientific

# THE SKILLS REQUIRED ARE EVOLVING

**Question:** What are the most important it skills you plan to hire for?




2018 Global CIO Survey. Deloitte.



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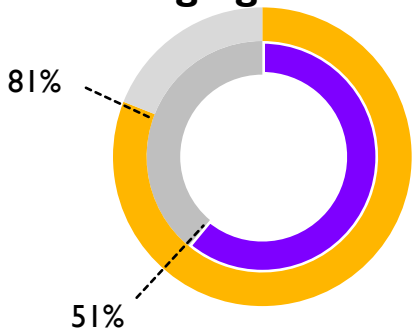
# SKILLS AND COMPETENCIES REQUIRED FOR AN ARCHITECT

| Skills | Competencies |
|---|---|
| Communication – be a storyteller | Influencing business strategy |
| Group session facilitation | Translating or mapping business strategy into information strategy |
| Team Leadership | Understanding technology product and vendor strategies, products and customer preferences |
| Marketing | Understanding, modeling and representing the organizations business requirements in a clear and easy to consume manner |
| Analysis and Design | Understanding the business needs for solutions |
| Modeling and graphical representations | Being viewed as a trusted advisor to the organization |
| Management and Leadership | Understanding of appropriate technologies |
| Curiosity and humility | Influencing the organization to accomplish goals and needs through architecture activities |

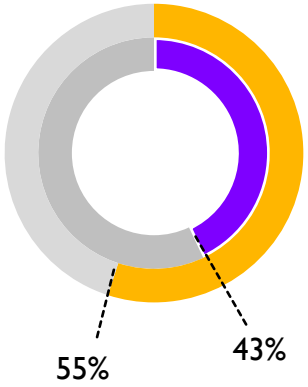
# TECHNOLOGY INNOVATORS ARE BETTING ON CULTURE AS A TALENT MAGNET – AND A RETENTION STRATEGY

**Question:** Which of the following aspects of your organizations culture help attract and retain IT talent?

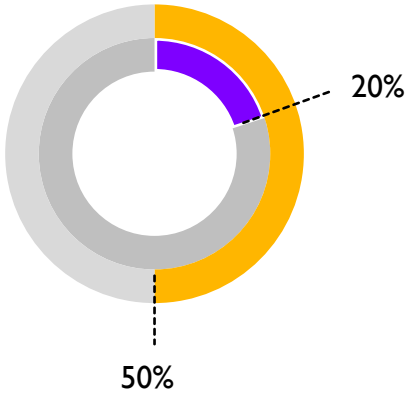
**Opportunities to work with new and emerging technologies**



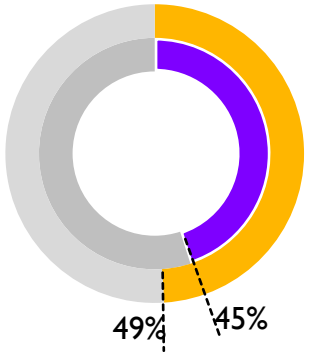

**Fun, creative, inspiring environments**



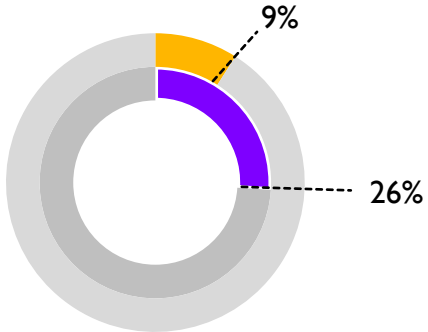

**Organization is considered an innovation leader in IT**




**Flexible work arrangements Including telecommuting**




**Our culture makes it difficult**




Technology Innovators

Baseline Organizations

2018 Global CIO Survey. Deloitte.

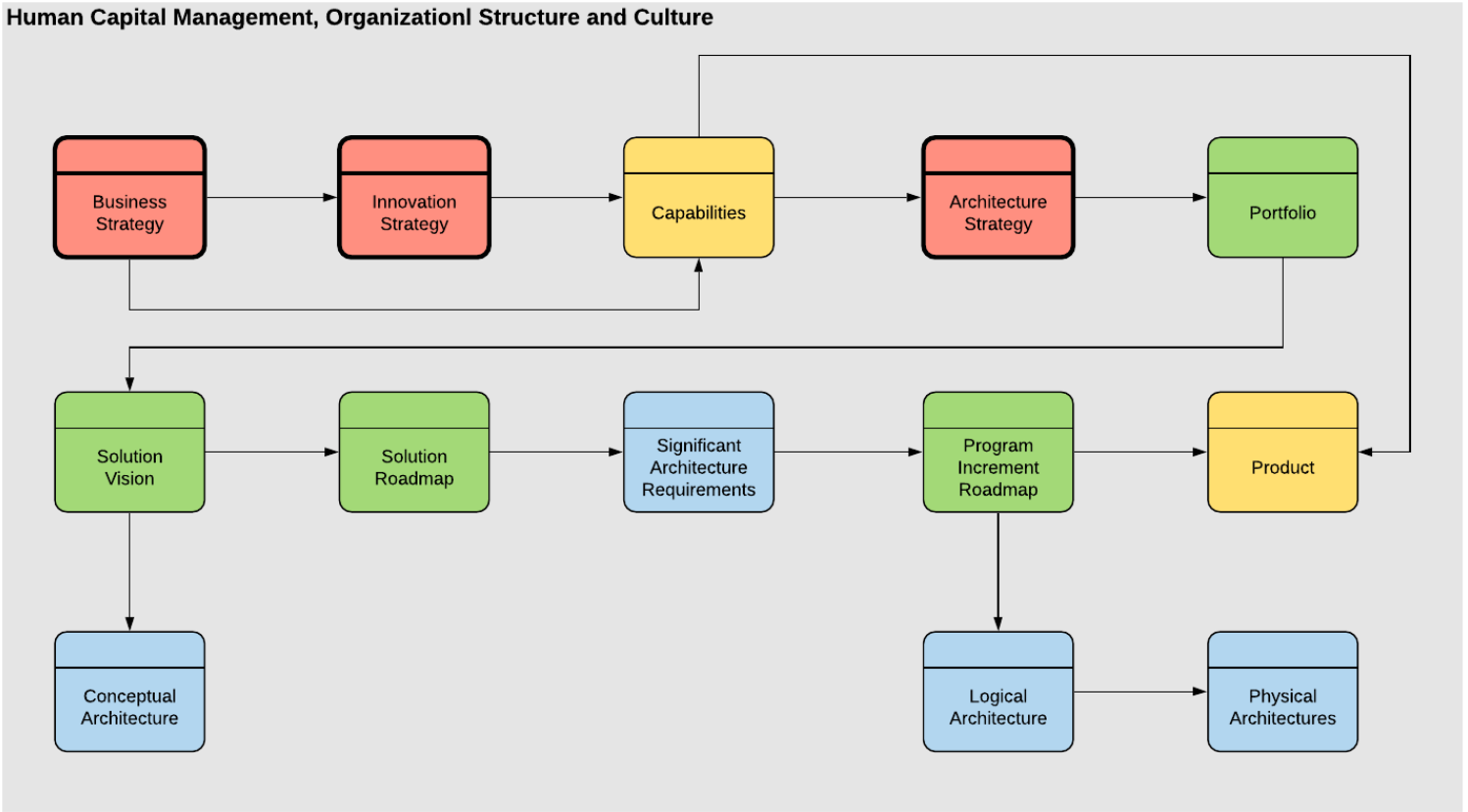
# ARCHITECTURE PRACTICE

- Practice
  - ”In reality, architecture is 90% people and 10% architecture”[10]
  - EA and technology innovation leaders should focus on business strategy, innovation and collaboration to help meet digital business expectations
  - Organizations continue to be transformed through digital innovation
  - Enterprise architects and innovation leaders need to increase their focus not just on leading technology and digital business innovation but also on delivering business outcomes and execution
  - The practice needs to focus on business outcomes working in a flexible and creative way to help define the future and how to get there
  - The practice must extend business-outcomes-driven architectures to include a new set of skills and knowledge that will support digital business innovation
  - Aligning the appropriate skills and knowledge of the practice of architecture to foster business and IT alignment also means breaking down the silos
  - The move to a collaborative process involving different business and IT stakeholders addressing alignment of the strategies will result in better business outcomes

# PUTTING IT ALL TOGETHER

- Aligning business, innovation and architecture strategies
- Time to value is a key consideration for determining the appropriate process for delivering key strategic initiatives
- Agile processes for product delivery result in delivering incremental business value over time
- Human capital management, organizational structure and culture will drive the success of aligning business, innovation and architecture strategies through agile processes

**Aligning Business and IT through Innovation and Architecture**



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# CLOSING REMARKS

- Thank You for attending the 2018 MACC Conference Workshop!



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