Welcome to the Midwest Architecture Community Collaboration

2018 Workshop

Aligning Business, Innovation and Architecture Strategy

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

Jerry Campbell	He has more than 25 years of experience helping organizations use architecture to deliver business value, improve IT efficiency and help manage IT technology life cycles during market disruption. He works with global clients to drive Technology Transformation and the IT Advisory practice.
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.
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 if you need to take a call

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MACC WORKSHOP AGENDA

Morning

- MACC Overview
- Presenters
- Objectives
- Why Should a Business Innovate?
- How does a Business Innovate?
- Tinkleman Case Study
- Tinkleman Business Analysis Workshop

Afternoon

- How do Architects Support Innovation?
- Managed Innovation Process
- Industry Foresight
- Core Technologies and Competencies
- Process and Structural Readiness
- Disciplined Implementation
- Tinkleman Architecture Analysis Workshop

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MACC WORKSHOP OBJECTIVES

- Understand how a business aligns business, innovation and architecture strategy
- Understand why a business must innovate
- Understand how to measure an organization's ability to support innovation
- Understand the architecture drivers that support a strategic innovation framework
- Understand how to incrementally mature architecture practices to support innovation

MACC WORKSHOP LEVEL SETTING

- There are many variables that need to be taken into account when addressing the specific approach for supporting innovation in companies
  - Examples available in the literature are very specific and unique to a given company
- During this workshop, an approach will be presented that helps to facilitate the discussion about innovation and is not necessarily an approach that is complete
  - Information is provided to facilitate the discussion of innovation and how a business might support it through an aligned process
- When planning for your own company, the process of innovation will likely be in some state of maturity
  - Innovation may be ad hoc and not necessarily recognized
  - Innovation may not be structured
  - Innovation may not be aligned across all disciplines
- Innovation, to be successful, must be supported by a process and must be aligned across business and IT
  - We are making an attempt to work through various aspects of business innovation but the reality is that innovation is most often unique to the company or organization

IMPACT OF BUSINESS INNOVATION

- What is the impact of business innovation? It is different for different businesses but in general, the impact of business innovation results in:
  - Profit/margins increase
  - Product diversification
  - Product differentiation
  - Satisfying consumer needs
  - Protecting or increasing market share
  - Securing a strategic market position
  - New business opportunities
  - Increase in competitive advantage
  - Taking advantage of economies of scale

INNOVATION SPARKS TRANSFORMATIVE CHANGE

- Retail Markets
  - Transforming the shopping experience
  - A POS device allows retailers to conduct transactions on the sales floor eliminating checkout lines, reducing customer's wait times and streamlining inventory management
- Healthcare Markets
  - Using analytics to determine the most effective and economical treatments for chronic illnesses and common diseases
  - Reducing cost of care to the patient and overall spend by optimizing treatment regimens for specific health conditions
- Financial Services Markets
  - Using data and analytics to create revenue from improved risk decisions as accurate risk models are a competitive advantage for banks and insurers
  - Innovation in big data and analytics is transforming the product landscape for financial institutions

WHY SHOULD A BUSINESS INNOVATE ?

Regulatory Change is a reaction, or anticipated reaction to new pressures from regulatory disruption. These changes can impact existing and / or adjacent markets and can be ambiguous

Geographic Expansion is a growth and change in a new country or region of the world. It incorporates differentiation and regulatory change and open new markets and customers

Competitive Differentiation provides new products, services, or brands within the same or adjacent markets. Typically used to strengthen existing market relationships.

Growth accelerated acquisition of new customers, new markets, new operations with a focus on vertical integration and cost effectiveness. Typically used by maturing organizations to expand market presence.

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WHY SHOULD A BUSINESS INNOVATE?

- Regulatory Change - Innovation can help a business address changes to operations, relationships in the marketplace, and acquire start-ups and create joint ventures to address changes in market place rules.
  - Health care insurance and providers have recently used these approaches to address changes resulting from ACA.
  - Oil and Gas companies have used innovation to produce new methods of extraction and production management in response to regulatory environmental changes.
  - Medical device manufactures have responded to regulatory changes in health care to innovate data collection and reporting as a result to rules around "meaningful use."
- Growth – Innovation can help business achieve growth through vertical integration of processes and services across lines-of-business while achieving more customers and producing efficiencies of scale.
  - Financial service organizations have leveraged vertical integration to simplify operations, achieve cost efficiencies, grow revenue through cross-product and service offerings, and increase customer base through targeted marketing
  - Retailers leverage innovation to reduce costs in distribution through the use of drop-shipping, marketplace concentration, and pricing / volume efficiencies
- Competitive Differentiation – Innovation can help drive new products, services and brands into existing or adjacent marketplaces by disrupting existing competitors
  - Health care providers have used innovation to drive integrated care management across large networks and partners to improve the quality of care and reduce revenue leakage
  - Telecommunication providers have used innovation to drive existing content into new channels for delivery and produce a stronger brand
- Geographic Expansion – Innovation enables companies to become "boarder-less" in operations while gaining new customers and revenue
  - Service providers have expanded beyond US boarders to drive their service and operations into new markets while managing the impact due to new laws and service operations
  - Manufacturing organizations have used innovation to reduce cost in supply-chain and leverage labor cost reductions by operating across many countries

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WHAT HAPPENS IF THEY DON'T?

- Risk for not innovating

  Businesses that fail to innovate run the risk of:

  - losing market share to competitors
  - falling productivity and efficiency
  - losing key staff
  - experiencing steadily reducing margins and profit
  - going out of business

HOW SHOULD A BUSINESS INNOVATE?

- Start with Strategic planning

  a strategic vision of how you want your business to develop
- Find out who your competitors are
- Study market or industry trends
- Build a relationship with your customers, and continue to communicate effectively with them as well
- Involve your suppliers and other business partners
- Ask these innovative questions of your organization when embarking on the innovation journey:
  - what impact it will have on your business processes and practices
  - what extra training your staff may require
  - what extra resources you may need
  - how you'll finance the work
- Finally, include your vision in your business plan by:
  - putting down your goals, both long and short term and detailing how you intend to achieve them
  - linking goals to financial targets, such as achieving a specific turnover by a set date
  - reviewing your plan regularly

REFER TO COMPANION PRESENTATION FROM JERRY CAMPBELL

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TINKLEMAN MAJOR MILESTONES – 2015 THROUGH 2017

- 2015
  - Tinkleman partnered with a device maker, SSQGQ, who has created a new e-book device
  - Tinkleman was the exclusive partner
  - Tinkleman purchased a Digital Asset Management system from a custom vendor called Digital JAM when they went into the digital music distribution business
- 2016
  - Tinkleman architecture team (consisting primarily of Application architects) went through formal architecture process training to move from an ad hoc to a structured architecture process and formalizing project delivery lifecycles
  - Tinkleman invested in a new Customer Relationship Management System to replace an existing, spreadsheet based system that was used for sales management
- 2017
  - Tinkleman expanded their executive leadership team by hiring a Chief Marketing Officer
  - Tinkleman expanded their architecture team by adding Enterprise, Business, Solution, Information and Security architecture resources
  - Tinkleman entered the Gaming market to provide more opportunities to: 1) engage with their users, and 2) generate a new revenue stream
  - Tinkleman partnered with a Gaming Partner to provide gaming services to their gaming device customers
  - Tinkleman invested in new Enterprise Service Bus and API Management technology to create a core technology platform for new business initiatives

TINKLEMAN COMPANY ANALYSIS - 2018

- Tinkleman recently finished a consultant engagement to introduce an approach to innovation through an Innovation Strategy development process
- Tinkleman's executive leaders have diverging interests in each is trying to solve problems in their individual business areas
- Tinkleman hired a Chief Marketing Office in 2016 that has brought a fresh perspective to the team but Tinkleman's other executives seem to be in react mode to market changes
- Tinkleman's VP of R&D recognizes that he needs to "get closer to the customer" in order to succeed with his new product development objectives
- Tinkleman's CIO is purely in reactive mode as the company tries to expand with new gaming products but doesn't have enough IT budget to fix core systems
- Tinkleman's executive leaders are each trying to solve their own problems as they determine what their individual definition of success is
- Tinkleman's mindset among its executives is a "silo" view of what needs to be done in each of the organization's areas to support revenue growth
- Tinkleman's executive team does a very good job of analyzing their own areas of responsibility but there is no overarching process to assure that investments being made align with an overall strategy
- Tinkleman does not have established innovation-related goals and measures as they have not formally adopted a process of innovation
- Tinkleman's innovation capability can be best described as ad hoc in nature that sometimes results in innovations but the process is not sustainable

FRAMEWORK FOR STRATEGIC INNOVATION

- A Framework for Strategic Innovation
  - Managed Innovation Process
  - Strategic Alignment
  - Industry Foresight
  - Consumer/Customer Insight
  - Core Technologies and Competencies
  - Cultural Readiness
  - Process and Structural Readiness
  - Disciplined Implementation
  - Innovation Goals and Metrics
  - Capacity for Sustainable Innovation

https://www.innovation-point.com/Strategic%20Innovation%20White%20Paper.pdf

THE MANAGED INNOVATION PROCESS

- Managed Innovation Process – Facilitating the interplay between external perspectives and an organization's internal capabilities/practices to explore a diverse array of new possibilities
  - Results in new growth strategies, new products and services, new ventures, new markets, new business models, new partnerships, new business practices
- Strategic Alignment – The alignment of and internal support among key stakeholders to focus an organization around shared visions, goals and actions
- Industry Foresight – Provides a top-down perspective that provides an understanding of the complex forces driving change, including emerging and converging trends, new technologies, competitive dynamics, potential dislocations and alternative scenarios
- Consumer/Customer Insight – Provides a bottom-up perspective, a deep understanding of both the explicitly stated and latent or unrecognized needs of existing potential consumers/customers
- Core Technologies and Competencies – The set of internal capabilities, organizational competencies and assets that could potentially be leveraged to deliver value to customers, including technologies, intellectual property, brand equity and strategic relationships
- Organizational Readiness – The ability of the company to act upon and implement new ideas and strategies, and to successfully manage the operational, political, cultural and financial demands that follow
- Disciplined Implementation – The success of innovation is enabled or limited by an organization's capacity for effective and structured implementation

https://www.innovation-point.com/Strategic%20Innovation%20White%20Paper.pdf

BALANCED AND SUSTAINABLE INNOVATION

- Three types of innovation
  - Core Innovation
  - Adjacent Innovation
  - Transformative Innovation
- Models of Innovation
  - Dual Model
    - Transformation A + Capabilities Link + Transformation B = Dual Transformation
  - Transformation A – Repositioning the Core
    - Transformation A is about changing the *"How"*
  - Transformation B – Creating the New
    - Transformation B is about leveraging the *"How"*
  - Capabilities Link
    - People
    - Process
    - Information
    - Technology

Dual Transformation, How to Reposition Today's Business While Creating the Future – Scott D. Anthony, Clark G. Gilbert, Mark W. Johnson (2017)

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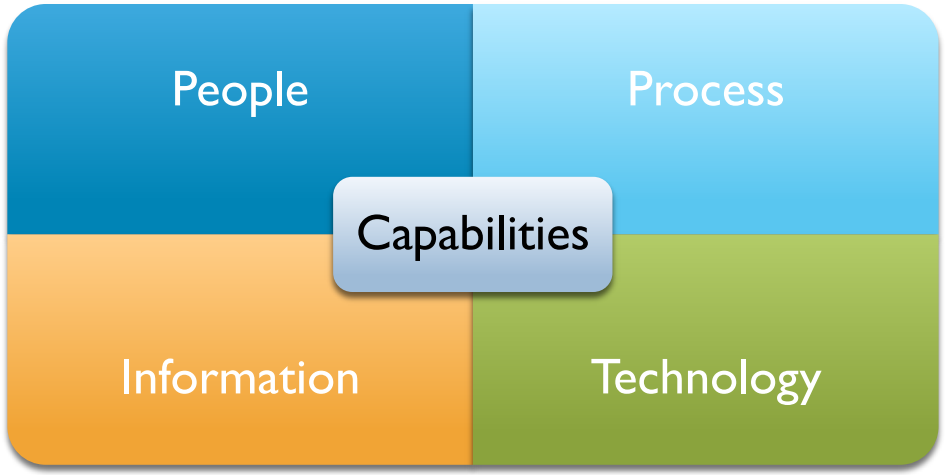
BALANCED AND SUSTAINABLE INNOVATION MANAGEMENT

- What's the common denominator from an architecture perspective?
  - Capabilities are delivered through
    - People
    - Process
    - Information
    - Technology
  - Architecture perspective:
    - Innovation needs to address these four components of capabilities
      - People - Business and Enterprise architecture
      - Process - Business, Enterprise and Solution Architecture
      - Information - Business, Enterprise, Solution and Information Architecture
      - Technology - Enterprise, Solution, Information, Security, Application, Technical



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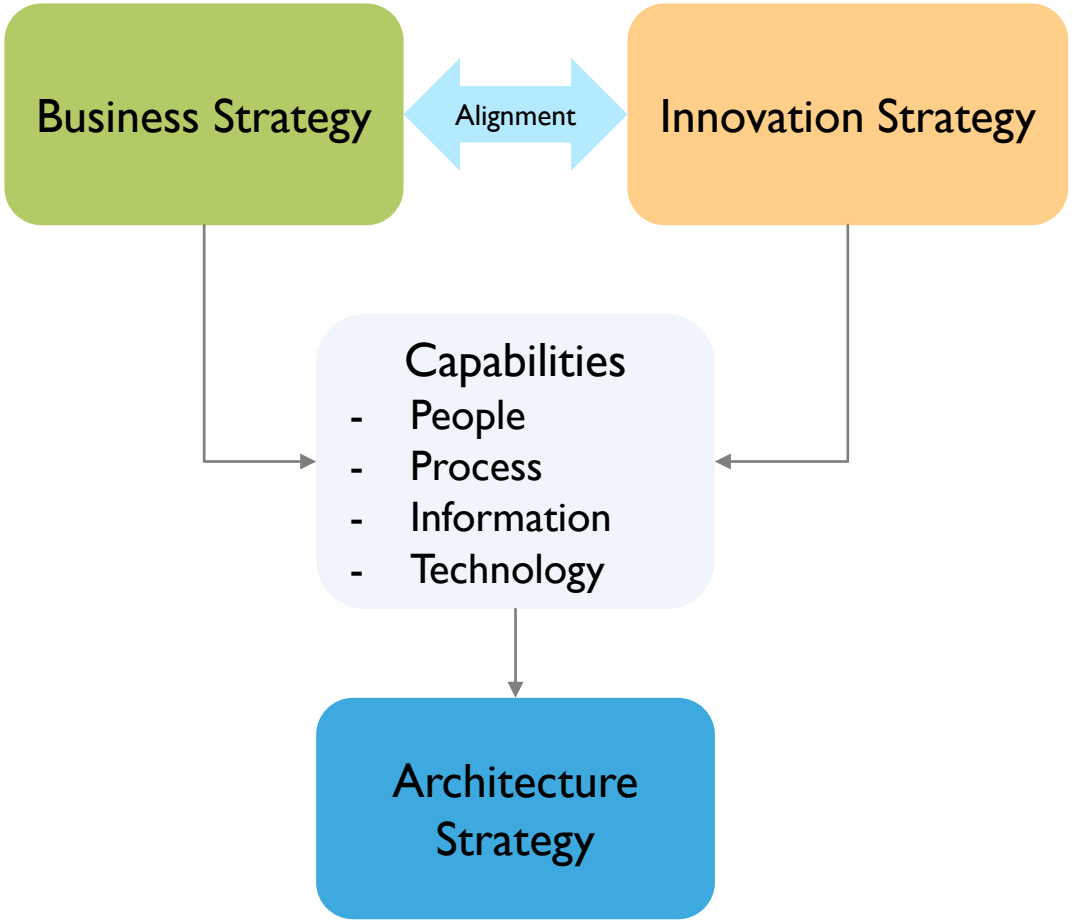
MANAGED INNOVATION PROCESS

- Business strategy must be aligned to innovation strategy in order to maximize innovation potential
- The capabilities of an organization support business strategies through people, process, information and technology components
- Architecture strategy is aligned to filling the people, process, information and technology gaps
- Capability gaps will drive the alignment with innovation and business strategies
- The architecture process needs to focus on innovation



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TINKLEMAN BUSINESS ANALYSIS LAB

Does Your Organization Practice Strategic Innovation?	
1=Strongly Disagree, 2=Disagree, 3=Agree, 4=Strongly Agree (Increments of .5)	
Guideline	**Score (1-4)**
1. Managed Innovation Process My organization's approach to strategy, new product development and process improvement goes beyond traditional planning methods and takes an externally-focused, exploratory approach that challenges the status quo and creatively inspires new thinking	
2. Strategic Alignment Our leadership supports (and actively drives) a collaborative culture that encourages different departments working cross-functionally to identify and develop innovative solutions	
3. Industry Foresight My organization has a systematic process for actively monitoring and exploring emerging trends and developing alternative scenarios that represent either threats or opportunities	
4. Consumer/Customer Insight My organization directly involves consumers/customers (both existing and potential) as an integral part of the innovation process as a means of identifying both articulated and unarticulated customer needs	
5. Core Technologies and Competencies My organization clearly understands its core competencies and has explicitly outlined the linkage between its long-term strategic goals and its short- and medium-term R&D investments and technology strategies. My organization actively explores new ways to extend beyond our existing competencies	
6. Cultural Readiness My organization demonstrates an innovative mindset, a bias for collaboration, an inclusive, non-bureaucratic decision-making style, a willingness to embrace change and a penchant for action	
7. Process and Structural Readiness My organization has (or demonstrates a mindset that is willing to develop) appropriate operational processes and functional structures and allocates adequate staffing, funding and management support to high priority innovation initiatives	
8. Disciplined Implementation My organization consistently demonstrates its ability to create measurable business impact by taking a disciplined approach to the implementation of strategic thinking	
9. Innovation Goals and Metrics My organization has established innovation-related goals and measures (for example: "X% of revenues must come from products/services introduced over the past Y years")	
10. Capacity of Sustainable Innovation My organization takes the time to learn from its innovation efforts and is committed to deliberately building an innovation-based culture and instituting a set of innovation-focused methodologies	
Adapted from "A Framework for Strategic Innovation - Blending strategy and innovative exploration to discover future business opportunities", Derrick Palmer & Soren Kaplan, Innovation Point LLC (www.innovation-point.com)	

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TINKLEMAN BUSINESS ANALYSIS LAB

- Use the handout provided to you (both document and electronic) to evaluate Tinkleman based on the Case Study as well as the Tinkleman Company Analysis – 2018 to assess Tinkleman's current state for supporting Innovation
- You will have 35 minutes to evaluate Tinkleman's score to determine their current ability to support Innovation
- It is meant to provide a general idea of how Tinkleman measures up across several critical dimensions
- Each group will share their results with the audience and indicate each of the guideline scores
- We will use this information in the second Lab later this afternoon when we will re-assess Tinkleman's capability to innovate based on drivers that Architecture can provide

FRAMEWORK FOR STRATEGIC INNOVATION

A Framework for Strategic Innovation:

1. **Managed Innovation Process**
2. Strategic Alignment
3. **Industry Foresight**
4. Consumer/Customer Insight
5. **Core Technologies and Competencies**
6. Cultural Readiness
7. **Process and Structural Readiness**
8. **Disciplined Implementation**
9. Innovation Goals and Metrics
10. Capacity for Sustainable Innovation

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TRADITIONAL STRATEGY VS. STRATEGIC INNOVATION

Traditional approaches	Strategic Innovation approach
Adopt a "present to future" orientation – takes today as a starting point	"Starts with the end in mind" – identifies long-term opportunities and then "bridges back to the present"
Assume a rule-make/taker (defensive/follower) posture	Assumes a rule-breaker (revolutionary) posture
Accept established business boundaries/product categories	Seeks to create new competitive space/playing fields
Focus on incremental innovation	Seeks breakthrough, disruptive innovation
Seek input from obvious, traditional sources	Seeks inspiration from unconventional sources
Seek articulated consumer needs	Seeks unarticulated consumer needs
Are technology-driven (seek consumer satisfaction)	Is consumer-inspired (seeks consumer delight)

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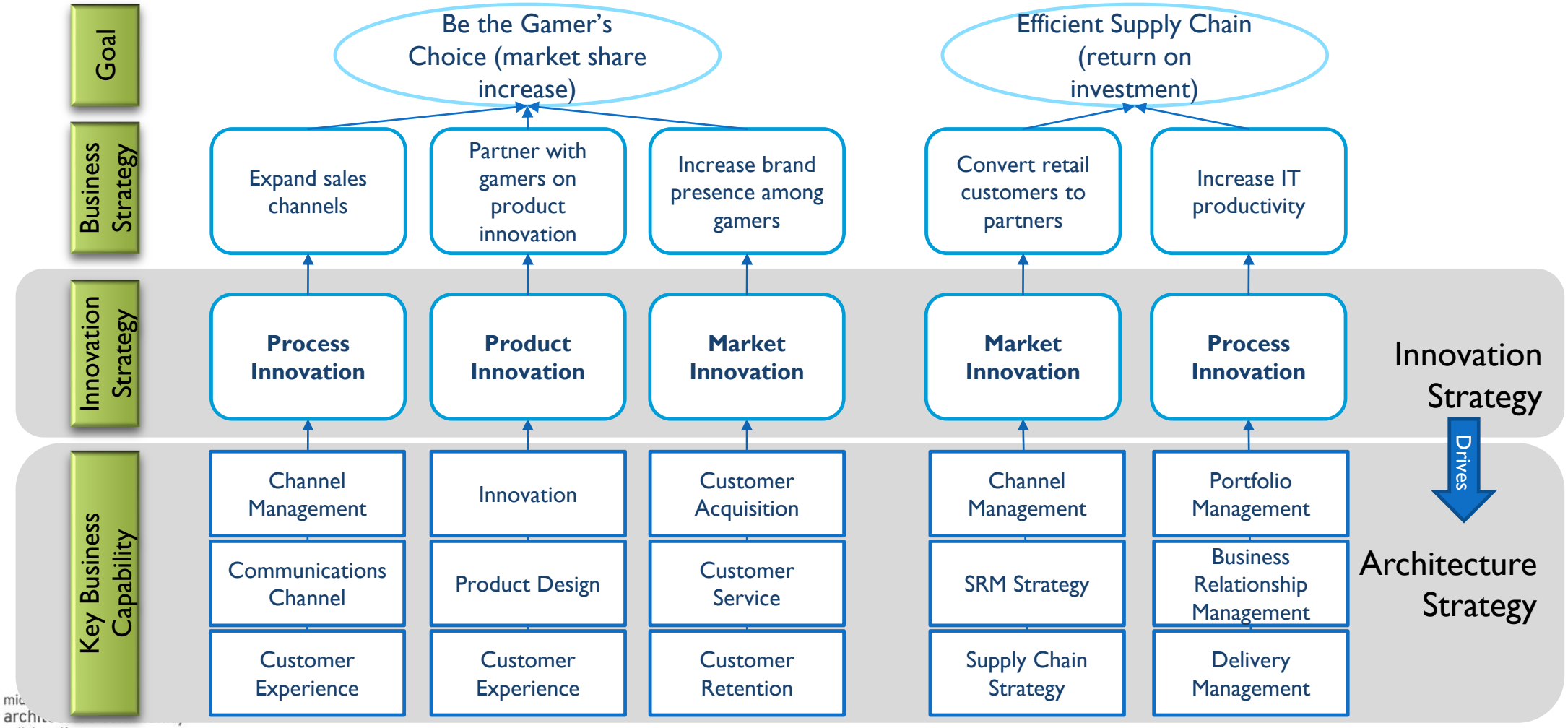
HOW DOES ARCHITECTURE HELP DRIVE THESE PRACTICES?

- **Managed Innovation Process**
  - Combining non-traditional and traditional approaches to business strategy
- **Industry Foresight**
  - Understanding emerging trends
- **Core Technologies and Competencies**
  - Leveraging and extending corporate assets
- **Process and Structural Readiness**
  - Ensuring processes, practices and organizational structures drive innovation
- **Disciplined Implementation**
  - Managing the path from inspiration to business impact

INCREASED EMPHASIS ON INNOVATION STRATEGY



SKILLS AND KNOWLEDGE - COMMON ARCHITECTURE DRIVERS

- Does a company have innovative ideas or do they have innovative people?
  - Hint: Innovative people with the appropriate skills and knowledge and must be willing to accept uncertainty in developing appropriate strategies to support innovation
- A thorough knowledge of an organization's product domain, relevant technologies and development processes is required to assess your ability to support innovation strategies
  - What you know
    - Technology Expertise
    - Systems Experience
  - What you do
    - Create and Document Architecture
  - What you are
    - Abstractionist
    - Intelligent and Quick

"Technology Architect Competency Elaboration", Bredemeyer Consulting, Malan, R. and Bredemeyer, D., 2002

SKILLS AND KNOWLEDGE - WHAT YOU KNOW

	TECHNICAL EXPERTISE	SYSTEMS EXPERTISE
Level 1	Technology Specialist	Contributes to the Development of a System
Level 2	Technology Generalist	Experienced in owning a significant aspect of the design and implementation
Level 3	Technology Watch	Experienced in architecting a product/application
Level 4	Technology Thought Leader	Experienced in creating architectures in a complex organizational and technical setting

SKILLS AND KNOWLEDGE – WHAT YOU DO

	CREATE AND DOCUMENT ARCHITECTURE
Level 1	Owns the creation of a component or module of a system
Level 2	Leads the creation of an architecture for a specific product/application
Level 3	Leads the creation of an architecture for multiple products or applications
Level 4	Leads the creation of an architectural strategy for the enterprise

SKILLS AND KNOWLEDGE – WHAT YOU ARE

	ABSTRACTIONIST	INTELLIGENT AND QUICK
Level 1	Deals effectively with well-defined problems	Is able to apply known solutions in novel ways
Level 2	Deals effectively with problems that are less well-defined, often with unclear objectives	Is well-respected for technical skill and ability to resolve technical issues
Level 3	Is tolerant of significant ambiguity and poorly defined objectives	Has credibility with technical experts because he/she can quickly grasp key issues
Level 4	Is tolerant of high degrees of ambiguity and helps to create the vision and strategy	Highly respected internally and externally as a sharp technical thinker who quickly technical implications

ARCHITECT'S ROLE – MANAGED INNOVATION PROCESS

Operationalizing Innovation is a term most often used by companies who are trying to develop a sustainable process for innovation

An architect will need to understand how these four cornerstones are aligned

<u>Keys to success:</u>

- Having an architect who is able to translate Enterprise Architecture concepts to the board's language
- The Enterprise Architecture discipline needs to reach a sufficient level of maturity due to taking on an enabling role to demonstrate its potential to add substantial value as compared to approaches where no models or structure supported digital transformation changes
- Create an environment where formal or informal contacts are well-established between an enterprise architect and executive leadership teams

Eul, M., Miller, J., Hagen, C., "The CIO's Role in "Operationalizing" Innovation, ATKearney, 2014.

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Bontinck, B., Cumps, B., Viaene, S. Vlerick Business School, Bille, W., VanDen Brande, J., "From Enterprise Architect to Opportunity Architect", April, 2016.

ARCHITECT'S ROLE – MANAGED INNOVATION PROCESS

What behaviors should an Architect demonstrate?

- Have an ACTIVE seat at the table
- Communicate with gravitas to drive new ways of thinking
- Understand as much about the business as the business does
- Provide "divergent" thinking – open the door to the "art of the possible"

"Creativity is about divergent thinking. Innovation is about convergent thinking." Ikujiro Nonaka

ARCHITECT'S ROLE – INDUSTRY FORESIGHT

Industry foresight is an approach that explores the drivers, trends, enablers and dislocations within one or more industries

An architect will need to understand the business as it stands today – and what the potential disruptors are in the future – along with defining the pragmatic enablers that may already be in place.

Keys to success:

- Having an architect who is focused on emerging trends and technologies which will enable their organization to avert threats and to identify potential market opportunities that may arise is critical.
- The Enterprise Architecture discipline needs to reach a sufficient level of maturity to actively seek out opportunities to stretch their thinking and to move beyond their own set of inbuilt experiences, beliefs and blind spots. They need "intellectual humility" to ensure they don't dismiss potential opportunities.
- The Architecture function needs to develop the credibility in the organization to bring these new ideas to the business. This is where having a balance of the "art of the possible" and the "reality of the business" is especially important.

"I skate to where the puck is going to be, not where it has been." - Wayne Gretzky

ARCHITECT'S ROLE – INDUSTRY FORESIGHT

What behaviors should an Architect demonstrate?

- Intellectual curiosity to explore industry and technology trends – look beyond the obvious
- Intellectual humility to understand when things are changing - what got us here won't get us there
- Communication style which is credible without being condescending
- Development of a network across the enterprise to facilitate collaboration

A problem cannot be solved by the same consciousness that created it. Einstein

ARCHITECT'S ROLE – CORE TECHNOLOGIES AND COMPETENCIES

Even when an organization has deep insight into consumer/customer needs and future trends, transforming ideas into action is an uphill battle. There needs to be a keen sense of the organization's inherent strengths and ability to leverage its core assets.

It is essential to not just consider an organization's technologies but also other capabilities that are integral to success such as – intellectual property or patents, brand equity, speed and operational agility, unique business practices.

<u>Keys to success:</u>

- Having an architect who is focused on emerging trends and technologies which will enable their organization to avert threats and to identify potential market opportunities that may arise is critical.
- The Enterprise Architecture discipline needs to reach a sufficient level of maturity to actively seek out opportunities to stretch their thinking and to move beyond their own set of inbuilt experiences, beliefs and blind spots. They need "intellectual humility" to ensure they don't dismiss potential opportunities.
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ARCHITECT'S ROLE – CORE TECHNOLOGIES AND COMPETENCIES

- In 2019, architects will need to know
  - Technology Trends
    - AI Foundation
      - Today's AI is Narrow AI
    - Intelligent Apps and Analytics
      - Augmented Analytics Will Enable Users to Spend More Time Acting on Insights
    - Intelligent Things
      - Swarms of Intelligent Things Will Work Together
    - Digital Twins
      - Digital Twins Will Be Linked to Other Digital Entities
    - Cloud to the Edge
      - Edge Computing Brings Distributed Computing into Cloud Style

Top 10 Strategic Technology Trends for 2018, Gartner, Cearley, D.W, Burke, B., Searle, S. and Walker, M., 2017

ARCHITECT'S ROLE – CORE TECHNOLOGIES AND COMPETENCIES

- Technology Trends
  - Conversational Platforms
    - Integration with Third-Party Services Will Further Increase Usefulness
  - Immersive Experience
    - VR and AR Can Help Increase Productivity
  - Blockchain
    - Blockchain Offers Significant Potential Long-Term Benefits Despite Its Challenges
  - Event-Driven Model
    - Events Will Become More Important in the Intelligent Digital Mesh
  - Continuous Adaptive Risk and Trust
    - Barriers Must Come Down Between Security and Application Teams

Top 10 Strategic Technology Trends for 2018, Gartner, Cearley, D.W, Burke, B., Searle, S. and Walker, M., 2017

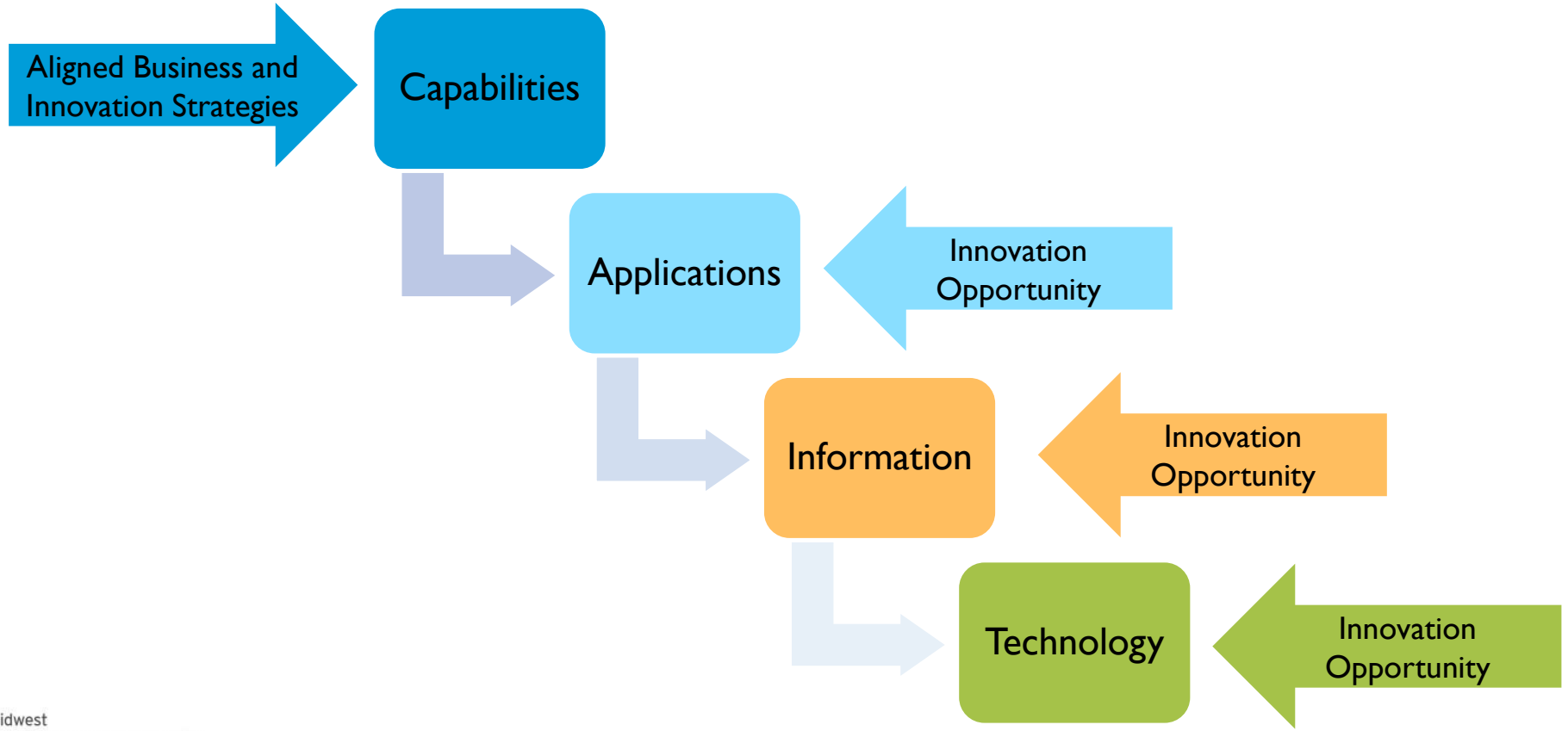
ARCHITECT'S ROLE – CORE TECHNOLOGIES AND COMPETENCIES

- Understanding the Practice
  - Strategies (Business, Innovation and Architecture) require a common link, Capabilities, in order to develop appropriate alignment and focus
  - Business Capabilities are the link for strategy alignment and innovation opportunities can be associated with the people, process, information and technology components of the Capability or Capabilities associated with a specific Business Strategy
  - Capabilities are supported by Applications
    - Capability to Application mapping provides information on Applications that may be part of an effort to innovate on a specific Business Capability
  - Applications are made up of technology and information generation that is used to understand the entire architectural landscape of a particular organization
  - Having this information identified prior to embarking on innovation efforts will make the practice of innovation easier and more effective

ARCHITECT'S ROLE – CORE TECHNOLOGIES AND COMPETENCIES

Capabilities to Applications to Information and Technology Mapping

- Maintaining a Catalog of Information on the Current State of the IT Organization



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ARCHITECT'S ROLE – CORE TECHNOLOGIES AND COMPETENCIES

What behaviors should an Architect demonstrate?

- Know the technology landscape of your company
- Provide expertise on new technologies and architecture (example: Blockchain, AI, Bots, UI . . .)
- Provide security expertise that is keeping with new technology and threats
- Understand how your company's other competencies drive business results
- Have a point of view of new technologies which could drive revenue
- Invest time in a "technical literacy" program for your company's leaders

ARCHITECT'S ROLE – PROCESS AND STRUCTURAL READINESS

Strategic Innovation often has profound implications in terms of operational, structural and business process change. Understanding an organization's readiness to act informs initial decisions about scoping innovation projects, time horizons and the desired level of breakthrough and enables a realistic approach to implementation.

Transitioning from idea generation into project management is most challenging in the structure of innovation.

<u>Keys to success:</u>

- Implementation skillsets and mindsets
- Maintaining momentum
- An understanding of organizational priorities and decision making processes
- A practical Stage Gate process (checkpoint process) (go/no-go type of decision)

ARCHITECT'S ROLE – PROCESS AND STRUCTURAL READINESS

What behaviors should an Architect demonstrate?

- Know the process landscape of your company
- Support the development of aspirational yet realistic project plans
- Work collaboratively across the business and technology in improving current processes
- Actively participate in all project meetings

"The real difficulty in changing the course of any enterprise lies not in development new ideas, but in escaping old ones."
John Maynard Keynes

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ARCHITECT'S ROLE – DISCIPLINED IMPLEMENTATION

Generating new product ideas is not necessarily that hard. It is the act of execution that innovation efforts frequently fail.

Disciplined implementation will help manage the path from inspiration to business impact. This includes set of activities that call for support and involvement across the organization that includes: Transition to specific project or programs, rapid prototyping, testing, building a business case, communicating to get buy-in, developing new business processes or creating new organizational structures.

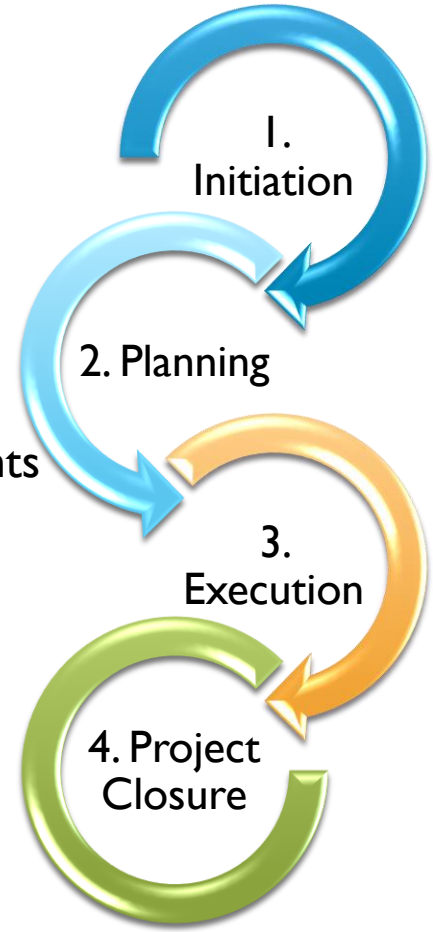
Keys to Success:

- Move from "idea generation" to "project management"
- Define rapid prototyping to fail early, fail fast, learn faster
- Ensure intentional collaboration.

DISCIPLINED IMPLEMENTATION – FORMALIZING THE PROJECT LIFECYCLE

- Initiation → 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
- Execution → 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



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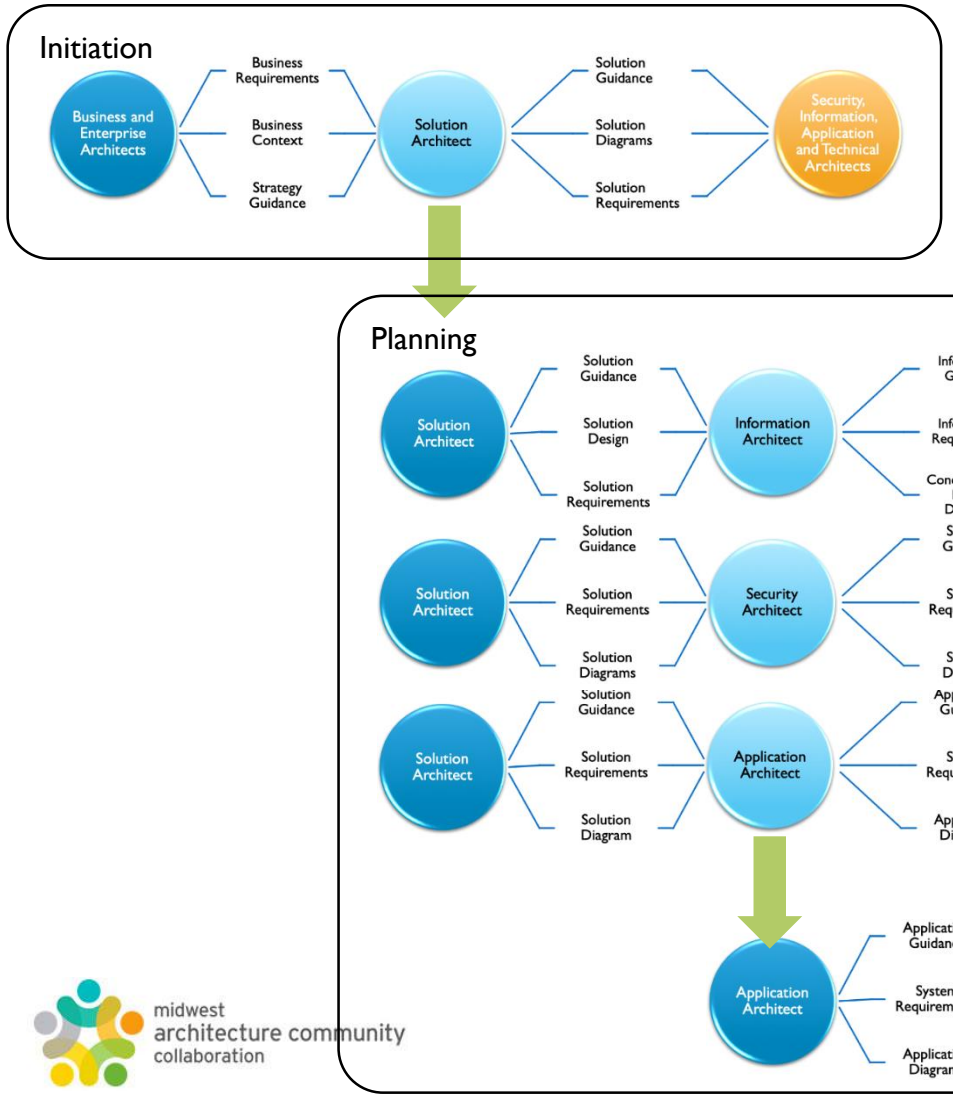
DISCIPLINED IMPLEMENTATION – ARCHITECTURE COLLABORATION



A formal, defined, repeatable architecture process supporting collaboration among the architecture domains along with an effective project management process.

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ARCHITECT'S ROLE – DISCIPLINED IMPLEMENTATION

What behaviors should an Architect demonstrate?

- Actively work with prototyping team to iterate and leverage currently available assets
- Help to tenaciously negotiate the obstacle-ridden path to business impact
- Communicate effectively with technology about future directions
- Identify innovations that have failed – and help to stop them

"Genius is one percent inspiration and ninety nine percent perspiration." Thomas Edison

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

HOW DOES ARCHITECTURE HELP DRIVE THESE PRACTICES?

- **Managed Innovation Process**
  - Combining non-traditional and traditional approaches to business strategy
- **Industry Foresight**
  - Understanding emerging trends
- **Core Technologies and Competencies**
  - Leveraging and extending corporate assets
- **Process and Structural Readiness**
  - Ensuring processes, practices and organizational structures drive innovation
- **Disciplined Implementation**
  - Managing the path from inspiration to business impact

SKILLS AND COMPETENCIES AN ARCHITECT NEEDS

Now let's put this to practice!

TINKLEMAN ARCHITECTURE ANALYSIS LAB

- Use the handout provided to you (both document and electronic) to evaluate Tinkleman based on the results of the scoring in the morning's Tinkleman Business Analysis Lab
- This lab will use the five guidelines/practices where architecture is one of the driver's of innovation
  - Managed Innovation Process
  - Industry Foresight
  - Core Technologies and Competencies
  - Process and Structural Readiness
  - Disciplined Implementation
- You will have 35 minutes to determine what Tinkleman's architecture practice can do to increase Tinkleman's innovation capability score
- It is meant to provide a general idea of how Tinkleman could move their scores across five areas where architecture has been identified to be one of the drivers of innovation
- Each group will share their results with the audience and indicate each of the guideline scores

TINKLEMAN ARCHITECTURE ANALYSIS LAB

Does Your Organization Practice Strategic Innovation?		
1=Strongly Disagree, 2=Disagree, 3=Agree, 4=Strongly Agree (Increments of .5)		
Guideline	**Score (1-4)**	**Tinkleman Current State**
1. Managed Innovation Process My organization's approach to strategy, new product development and process improvement goes beyond traditional planning methods and takes an externally-focused, exploratory approach that challenges the status quo and creatively inspires new thinking		• Tinkleman has just recently finished a consultant engagement to introduce an approach to innovation through Innovation Strategy development
2. Strategic Alignment Our leadership supports (and actively drives) a collaborative culture that encourages different departments working cross-functionally to identify and develop innovative solutions		• Tinkleman's executive leaders have diverging interests in that each is trying to solve problems in their own areas
3. Industry Foresight My organization has a systematic process for actively monitoring and exploring emerging trends and developing alternative scenarios that represent either threats or opportunities		• Tinkleman hired a Chief Marketing Officer in 2016 and has brought a fresh perspective to the executive team. Tinkleman's other executives seem to be in react mode to market changes.
4. Consumer/Customer Insight My organization directly involves consumers/customers (both existing and potential) as an integral part of the innovation process as a means of identifying both articulated and unarticulated customer needs		• Tinkleman VP of R&D recognizes that he needs to "get closer to the customer" in order to succeed with his new product development objectives. They have exhibited an understanding of the need to be innovative when they released a new gaming capability in 2017 but it was not necessarily in a planned way.
5. Core Technologies and Competencies My organization clearly understands its core competencies and has explicitly outlined the linkage between its long-term strategic goals and its short- and medium-term R&D investments and technology strategies. My organization actively explores new ways to extend beyond our existing competencies		• Tinkleman's CIO is purely in reactive mode as the company tries to expand with new gaming products but doesn't have enough IT budget to fix core systems. He has expanded the architecture team at Tinkleman over the last five years but innovation is not something that his architects are aligned with.
6. Cultural Readiness My organization demonstrates an innovative mindset, a bias for collaboration, an inclusive, non-bureaucratic decision-making style, a willingness to embrace change and a penchant for action		• Tinkleman's executive leaders are each trying to solve their own problems as they determine what their definition of success is. Appropriate investments are not being made in core infrastructure as the approach has been ad hoc in nature and addresses only those new or expanded capabilities that are siloed to support an initiative.
7. Process and Structural Readiness My organization has (or demonstrates a mindset that is willing to develop) appropriate operational processes and functional structures and allocates adequate staffing, funding and management support to high priority innovation initiatives		• Tinkleman has been successful in spite of themselves but it remains to be seen when the "runway runs out". Tinkleman's mindset among its executives is still a silo view of what needs to be done in each of the organization's areas to support revenue growth.
8. Disciplined Implementation My organization consistently demonstrates its ability to create measurable business impact by taking a disciplined approach to the implementation of strategic thinking		• Tinklemans' executive team do a very good job of analyzing their own areas of responsibility but there is no overarching process to assure that investments being made align with an overall strategy. While Tinklemans has "innovative" products, they do not address innovation as a key part of aligning business strategy and innovation strategy.
9. Innovation Goals and Metrics My organization has established innovation-related goals and measures (for example: "X% of revenues must come from products/services introduced over the past Y years")		• Tinkleman does not have established innovation-related goals and measures. They are just starting their innovation journey through the completion of a consulting engagement process around operationalizing innovation.
10. Capacity of Sustainable Innovation My organization takes the time to learn from its innovation efforts and is committed to deliberately building an innovation-based culture and instituting a set of innovation-focused methodologies		• Tinkleman has developed "innovative" products since they have taken the time to understand the gamer experience. This is an example of "core" innovation. They have also expanded to another market that is new to them but aligned to their base products by introducing a gaming service in 2017. This is an "adjacent" innovation. Although effective, it is not a sustainable process that will continue to drive sustained growth.
Adapted from "A Framework for Strategic Innovation - Blending strategy and innovative exploration to discover future business opportunities", Derrick Palmer & Soren Kaplan, Innovation Point LLC (www.innovation-point.com)		

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The yellow highlighted rows are the practices/guidelines where architecture can become a driver. From an architecture perspective, determine how Tinkleman can increase their score (maturity) for the business overall by maturing their architecture practice to support innovation.

CLOSING REMARKS

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- Thank You for attending the 2018 MACC Conference Workshop!

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