CONSTRUCTION BUSINESS OWNER WEBINAR

How to Master Technology Strategic Planning in the AEC Industry

Presented by

Jay Snyder

Technology Practice Leader

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Our Speaker

Jay Snyder

Technology Practice Leader, FMI Corporation

Snyder has worked in the engineering and construction industry his entire career. He has an extensive background in SaaS technology, supply chain management and operational logistics. Snyder holds a bachelor's degree in construction management from SUNY ESF at Syracuse University and an MBA from Emory University.

Let's Dive In

- Current State of the Industry
- Understanding the Construction Technology Space
- Approaching Tech without a Plan
- Tech as an Enabling Solution
- Establishing Your Tech Point of View
- Creating Your Tech Vision
- Developing Your Tech Strategy
- Executing Your Tech Strategy
- Prepare for the Future

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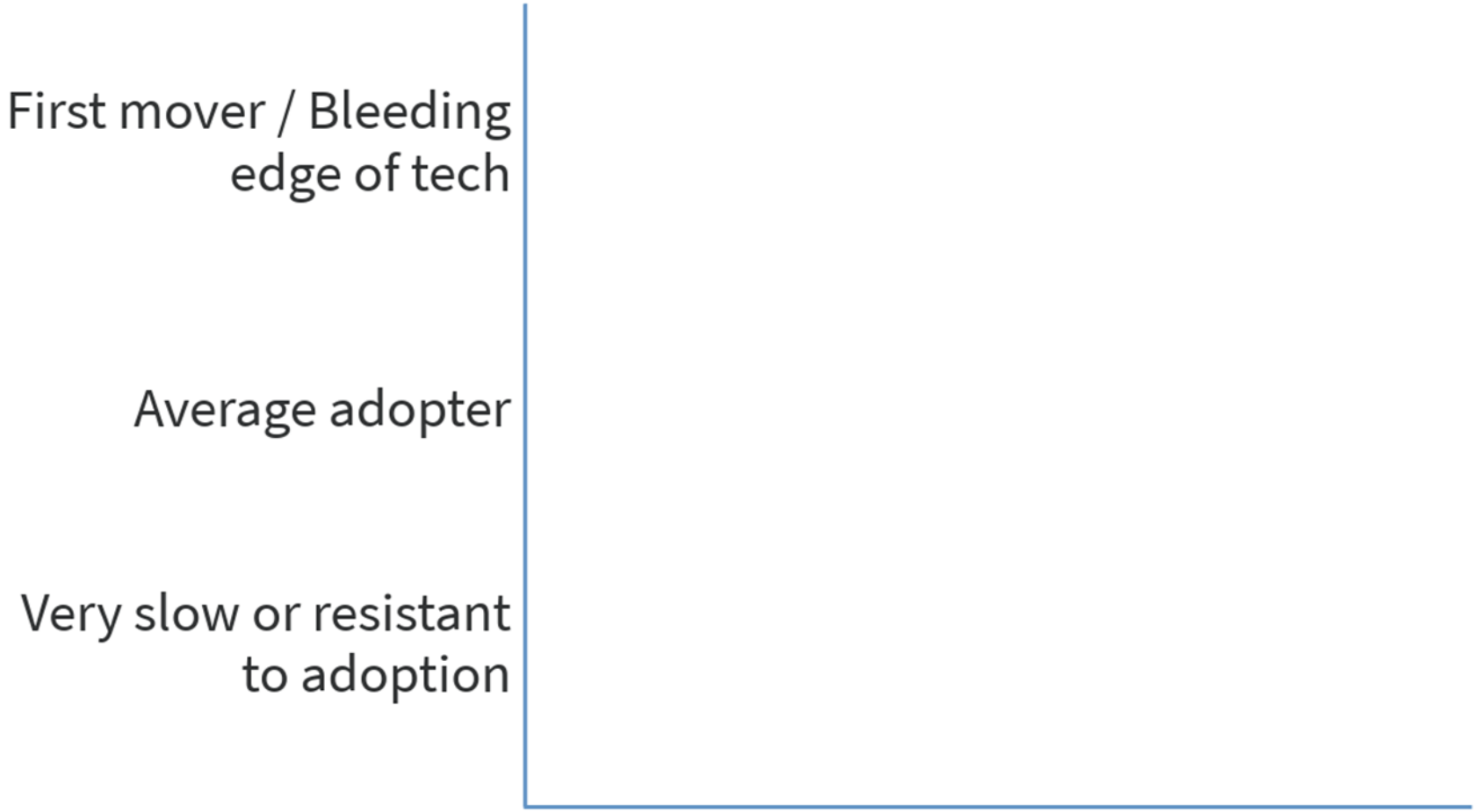
How would you describe your company's approach to technology?



Current State of Construction

- Business is good: 2018 construction spend expected to increase 5% over 2017
- Largest expected growth: Multifamily (7%), Lodging (8%), Commercial (11%)
- 75% of U.S. contractors have plans to add to their workforces – AGC Survey
- 89% of contractors reported difficulty finding qualified workers to hire
- 58% of the industry believes the next 5 years will evolve faster than the last 50 – AGC/FMI Industry Risk Survey

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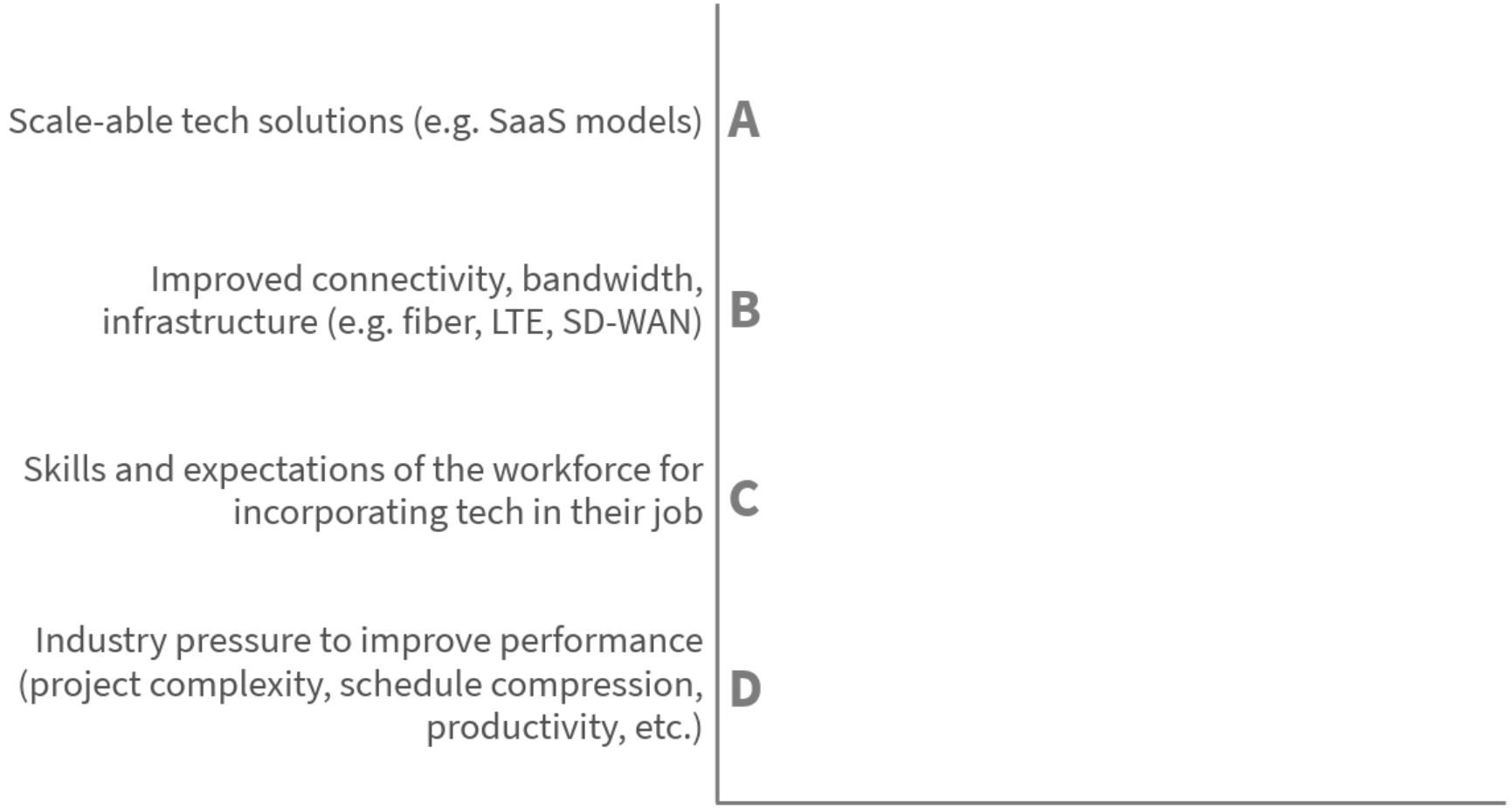
Which of these has been the largest catalyst to the accelerated pace of change in construction?



Understanding the Construction Tech Space

Lots of Solutions with Various Levels of Maturity

- MIS/Business intelligence dashboards
- Aerial drones and photogrammetry
- Labor and equipment productivity tracking
- VR/AR
- Prefabrication management/CAD to CAM
- Connected jobsites/Jobsite Wi-Fi
- Automated equipment
- Modular construction
- Exoskeleton assistive technology
- 5-D printing
- Nonmetallic conductive building materials
- Artificial intelligence/Predictive modeling

What is accelerating the pace of change?

- ***New cultural and social norms***
- ***Accessibility and scalability of technology***
- ***Increased industry pressures***
- ***…***

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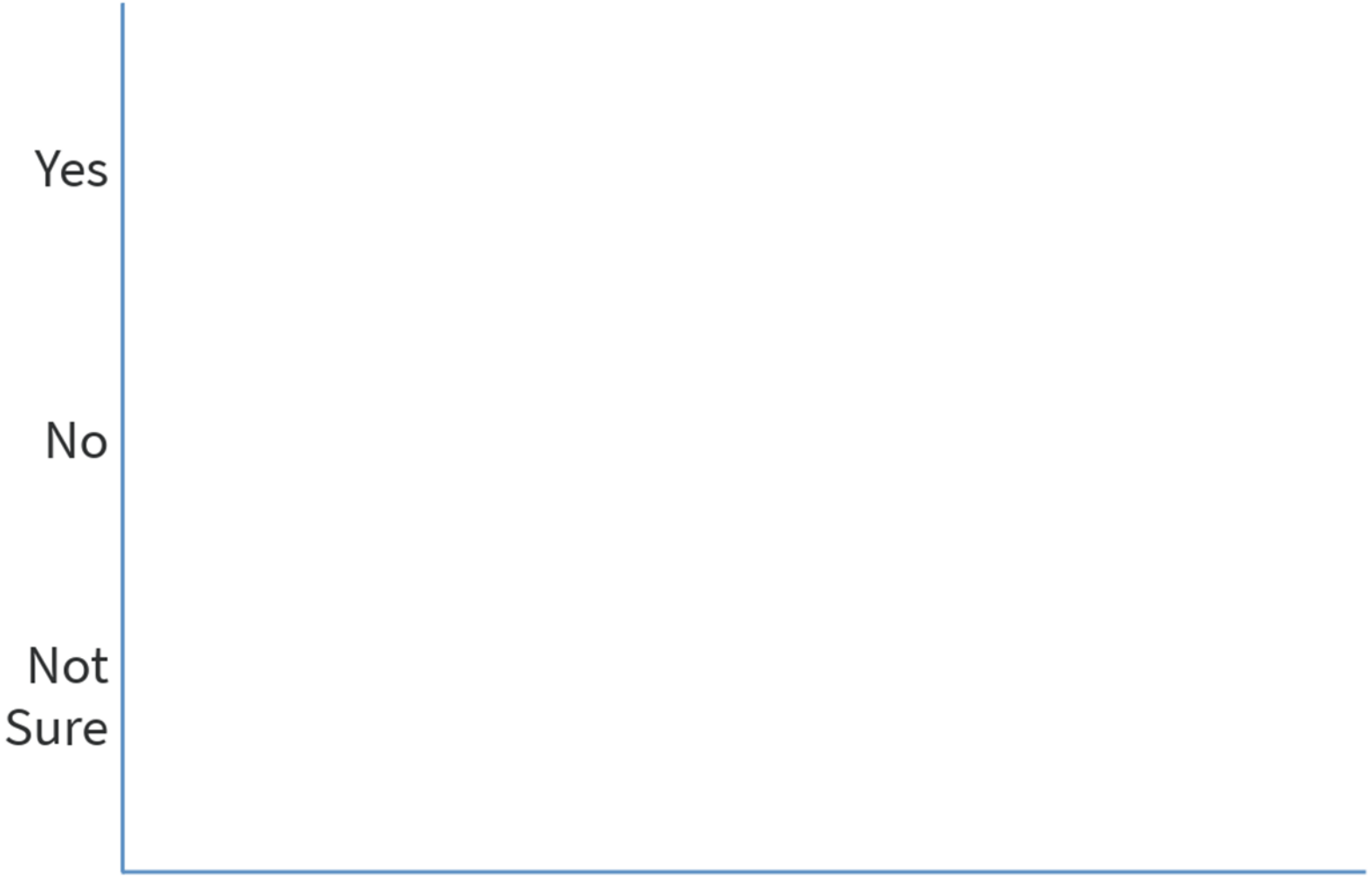
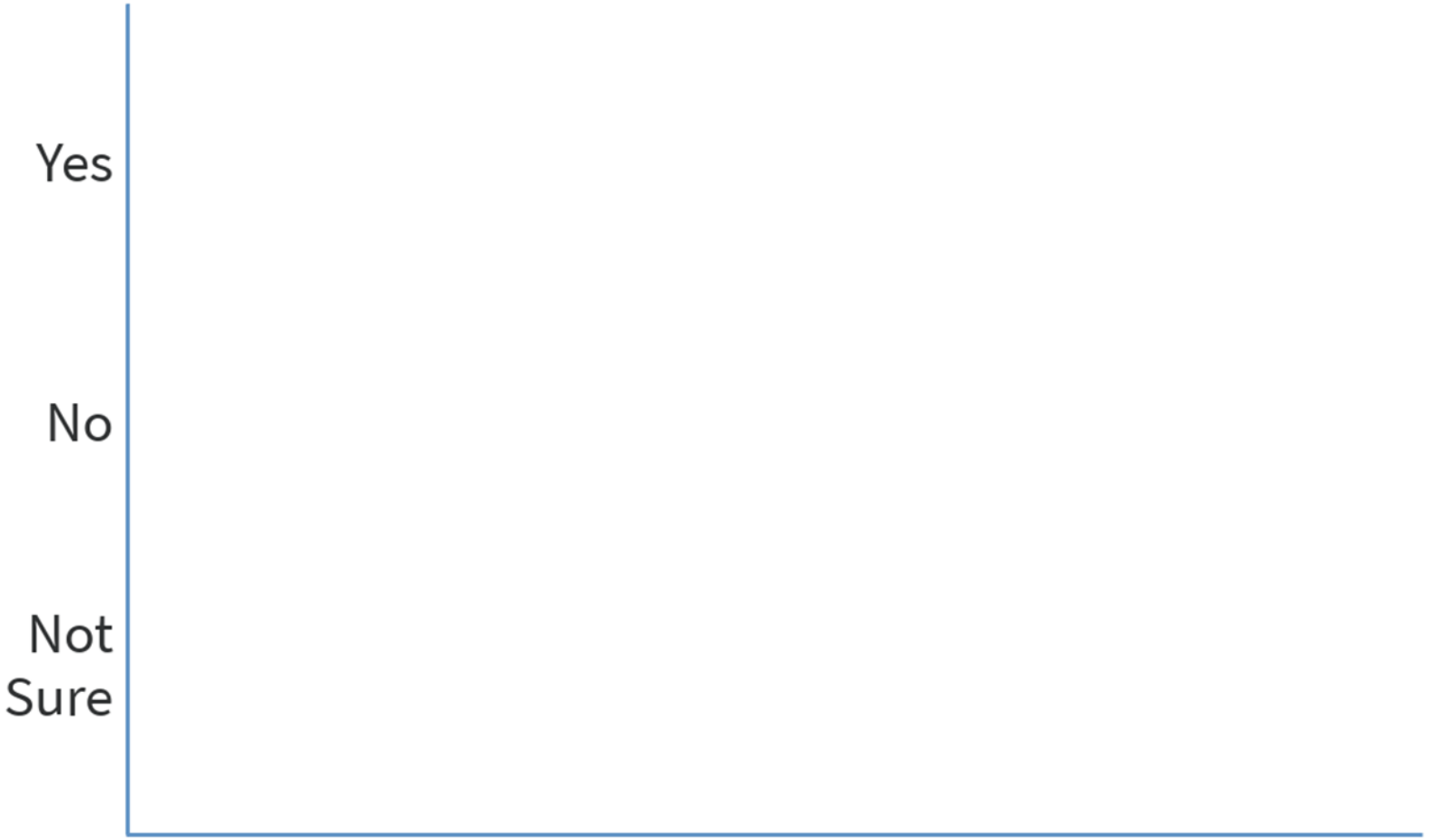
Tech as an Enabling Solution

- Strategic objectives are multidimensional – Most will have a tech component
- Accelerate your business strategic planning action items
- Enable change in months that may have taken years to attain before
- Amplify your value proposition and best practices
- MIS/BI – Achieve greater insights on business performance real-time
- Programs/Tools/Equipment – Improve the way your people work
- Recruit top talent

Does your company have a CIO or C-level equivalent position?



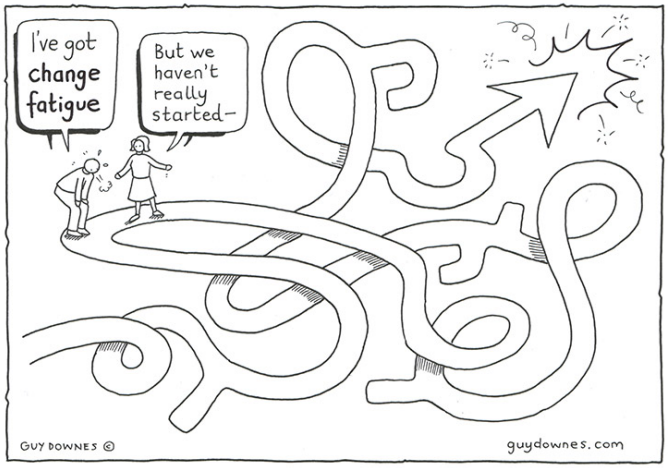
Does your company have a Point of View on technology as it relates to the business?



Approaching Tech Without a Plan

Inviting complete chaos & confusion

- Tech will be approached as a flavor of the week
- As new solutions are “tried” adoption rates will drop
- A “system of systems” will remain a dream
- The most powerful features of your tech won’t be leveraged or available
- ROI will be unclear, or even impossible to determine
- Discretionary selection will usurp data driven selection of your tech solutions
- Data mismanagement and cyberthreats may become a threat to the organization
- Money will be thrown down the drain
- Your company will experience tech “change fatigue”
- You will lose good people



*“In 90% of company-failure cases, **“too much change”** was a stated root cause and a crucial element in the actions that led up to the disaster.” – FMI Research: Why Contractors Fail*

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Establishing Your Tech Point of View

- What is the company's attitude toward industry technology (and innovation)?
- How does the company see technology? As a tool? As an enabler? As a driver?
- What practical purpose(s) does technology serve?
- How will technology spend be prioritized?
- What expectations do you have of employees?
- What expectations do you have of the project team?
- What impact do you want technology to have on the business?
- How do you define or determine a useful or successful technology solution?

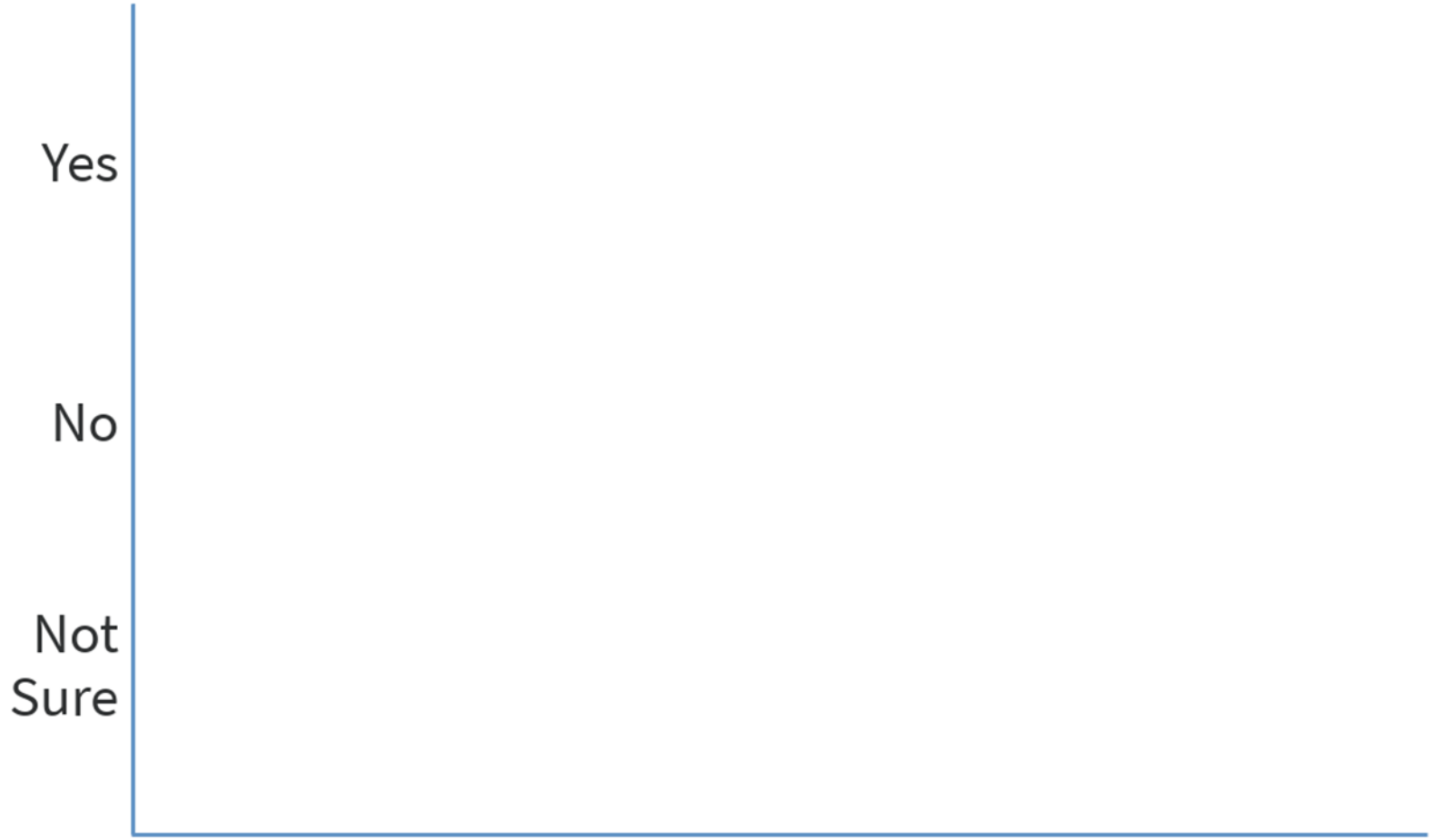
Creating Your Tech Vision

Take your tech point of view & evolve it into a long range vision

A good tech vision will:

- Shape the organizations mindset and opinion on tech
- Establish long term direction for how technology will be leveraged
- Guide the attitude and influence the skills of your employees
- Align the people, project teams and business units on the intent of the company
- Empower people to consider how tech can enhance performance and outcomes
- Embrace a certain amount of change to evolve with the industry and your market

Does your company currently have a technology strategy or tech roadmap?



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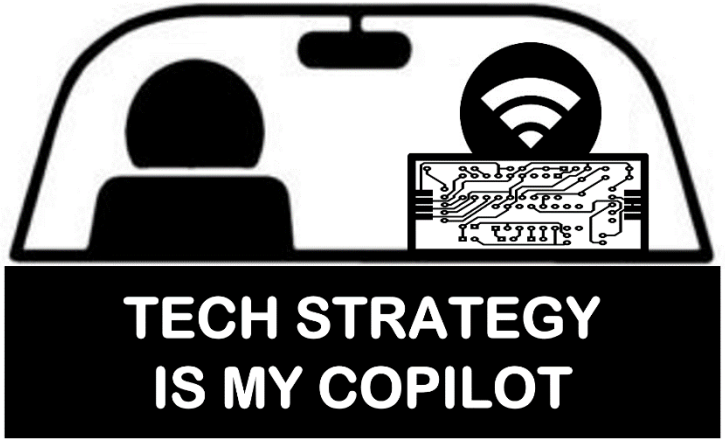
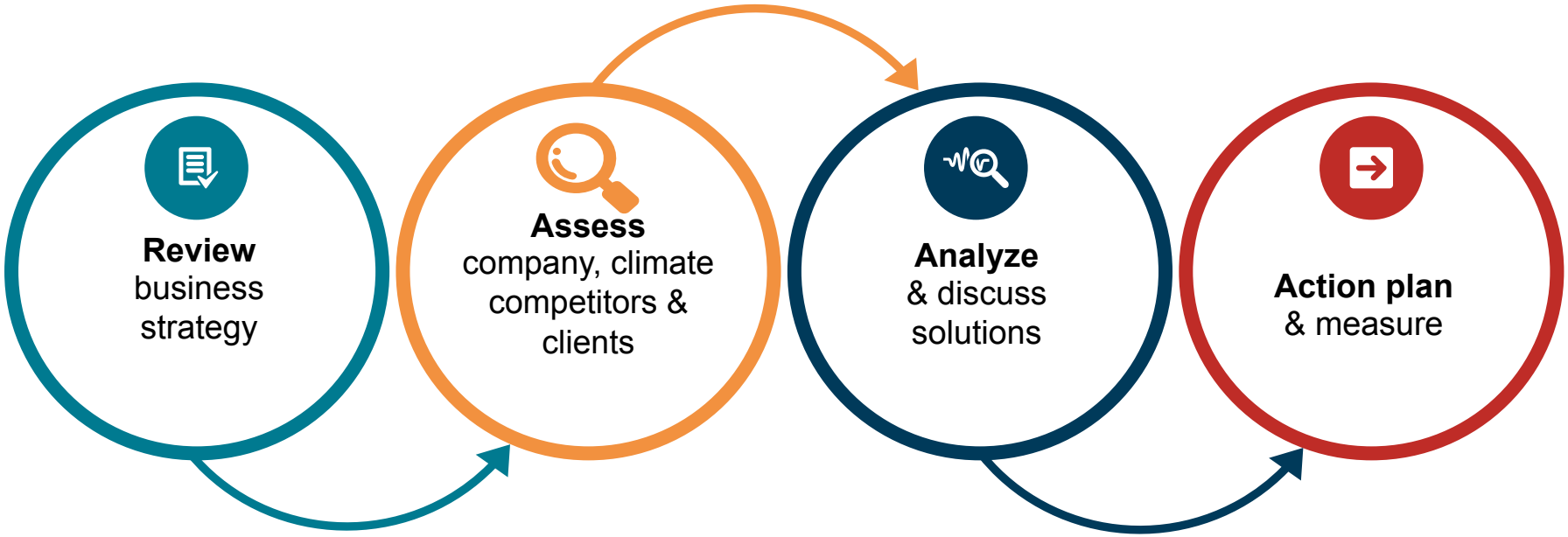
Developing Your Tech Strategy



Developing Your Tech Strategy

Leverage technology to support your strategic goals & operations



Review
Review strategic objectives for focus and identify those objectives that can benefit from improvements in how the company uses technology

Assess
- Strategic capabilities
- User/Skills
- Technology stack
- Competitor benchmarking
- Market and key clients

Analyze Gaps, Redundancies & Waste
- Gaps in employee/client expectations
- Areas of the business not leveraging tech
- Solutions that provide same capability
- Interoperability

Establish & Action
- Tech Strategy to guide you for the next 1-3 years
- Timeline for changes in tech stack, enabling existing tech or changes to business model
- Define KPIs in the action plan and measure progress

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Developing Your Tech Strategy

- Review strategic objectives
- Identify objectives that can be supported by technology
- Examine the business strategies action items, timeline and points of contact
- Identify stakeholders for those objectives that can be supported by tech
- Establish an internal technology steering/advisory committee
- Conduct a technology visioning workshop

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Developing Your Tech Strategy

- Strategic capabilities
- Technology stack
- Employee's needs/Wants/Skills
- Competitor benchmarking
- Market and clients demands

Developing Your Tech Strategy

Comprehensive Assessments Determine Internal & External Needs & Expectations for Technology in Your Business

STRATEGIC CAPABILITIES

The company has strategic technology capabilities that exist today. An assessment will reveal how effective the technology is utilized and how relevant the technology is in today's environment. Existing strategic capabilities may also be coupled with new technologies to enhance overall performance of the business.

TECHNOLOGY STACK

An understanding of the current technology stack includes an assessment of existing licensed software, software as a service subscriptions, server versus cloud platforms, hardware and mobile devices.

EMPLOYEE INTERVIEWS AND SURVEYS

Use of technology in the business relies on adoption by employees. Through employee interviews and/or surveys you must understand the general level of user sophistication and capabilities. This will assist in determining the readiness of the company to embrace or further improve technology.

COMPETITOR BENCHMARKING

An assessment of the competitor landscape and its use of technology is imperative when conducting any market analysis. A deeper understanding of competitors' strategies, strengths and weaknesses is a key component to assessing the market.

CLIENT INTERVIEWS

Candid client feedback is typically only available when collected by an independent third party. Moreover, however, any feedback you can collect allows you to quickly discern and prioritize strategies to increase the likelihood your company is recommended to others, enhance client loyalty and ultimately improve the company's use of technology to better meet the needs of the client.

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Developing Your Tech Strategy

Find the Gaps & Remove Redundancies

- Conduct Gap Analysis:
  - vs. client expectations
  - vs. competitors
  - vs. employee needs/wants
- Highlight current system/functional interoperability issues
- Determine redundant systems or systems no longer used but still supported in tech stack
- Determine associated needs such as tech training, infrastructure, support

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Executing Your Tech Strategy

Finalize Your Action Plan & KPIs

- Publish Technology Vision and Strategy
- Develop action plan to include specific tech initiatives to undertake and associated goals such as start/completion dates
- Setup dashboard to include defined KPIs to track and measure progress

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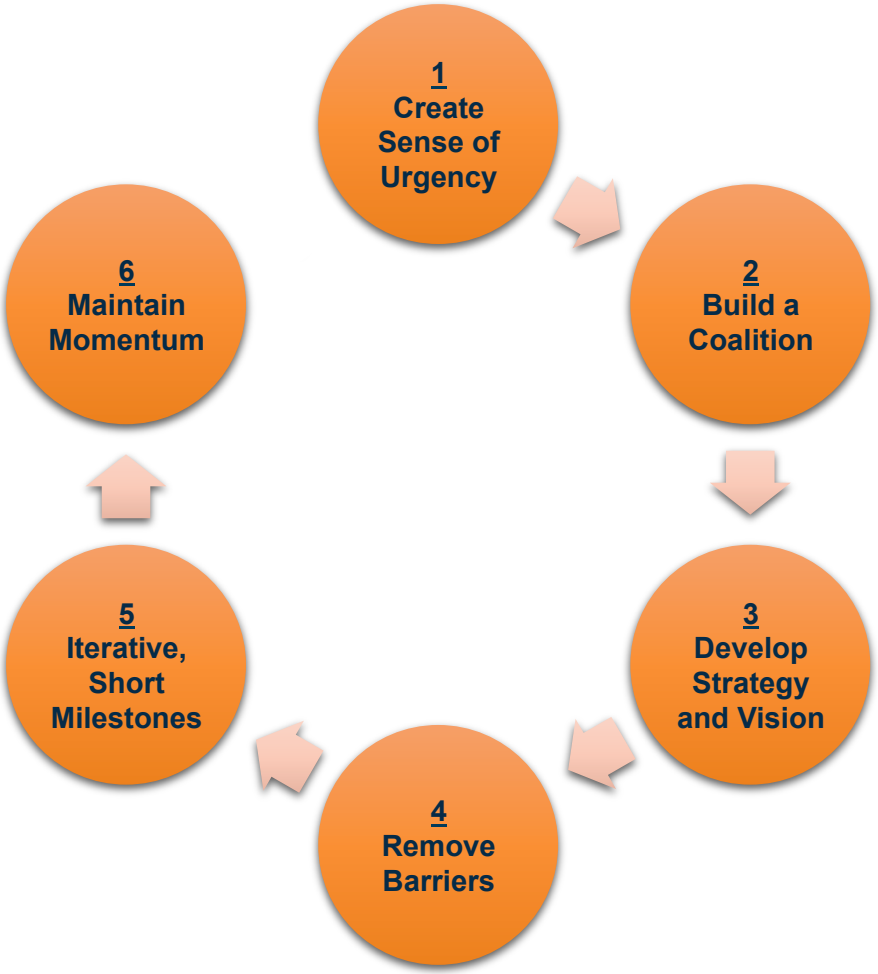
Change Management Best Practices

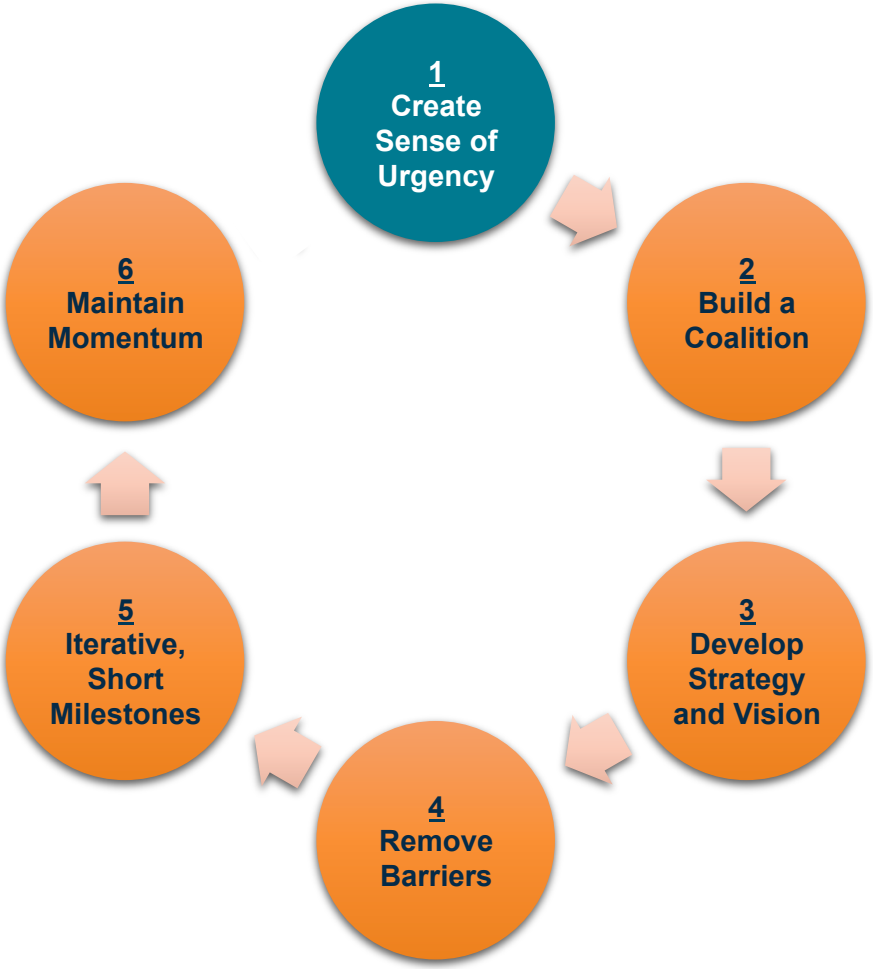
Purposeful & Deliberate Is Key

A simple plan for tech change management



Purposeful & Deliberate is Key

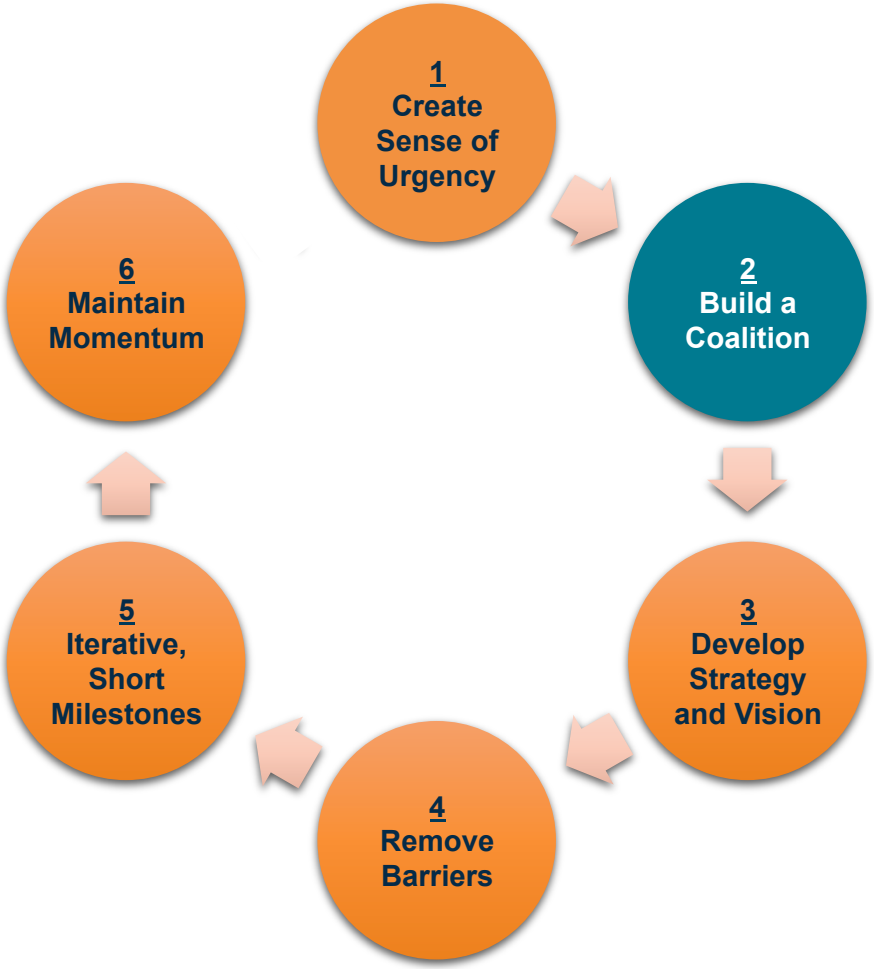
Create a Sense of Urgency



- Always tie back to the strategic objectives of the company
- Articulate the business need
- Explain the Current State vs. Envisioned Future State
- Communicate the impact of not making the change
- Make the outcome of the change relevant to employees

Purposeful & Deliberate is Key

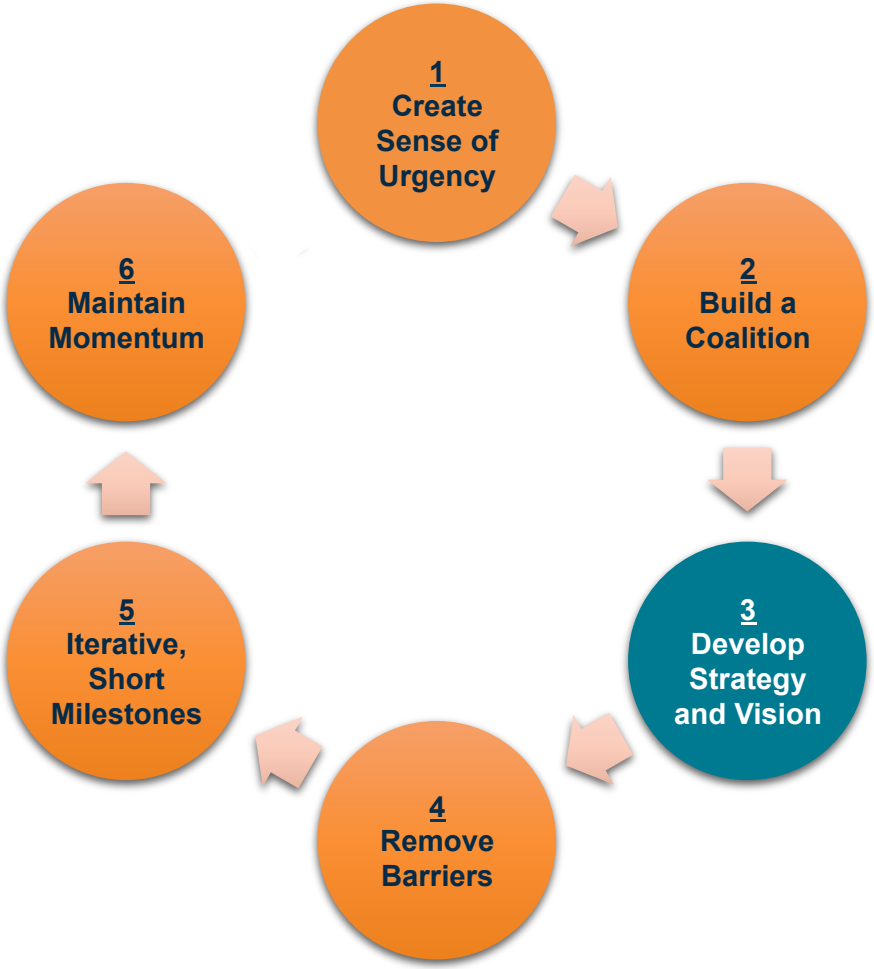
Build a Coalition



- Identify the stakeholders
- Define roles and responsibilities for those that will need to take action
- Explain the importance of change agents
- Organize your change agents into a committee to represent the company and lead the change
- Reward change agents in some way (recognition, comp time, other expressions of appreciation)

Purposeful & Deliberate is Key

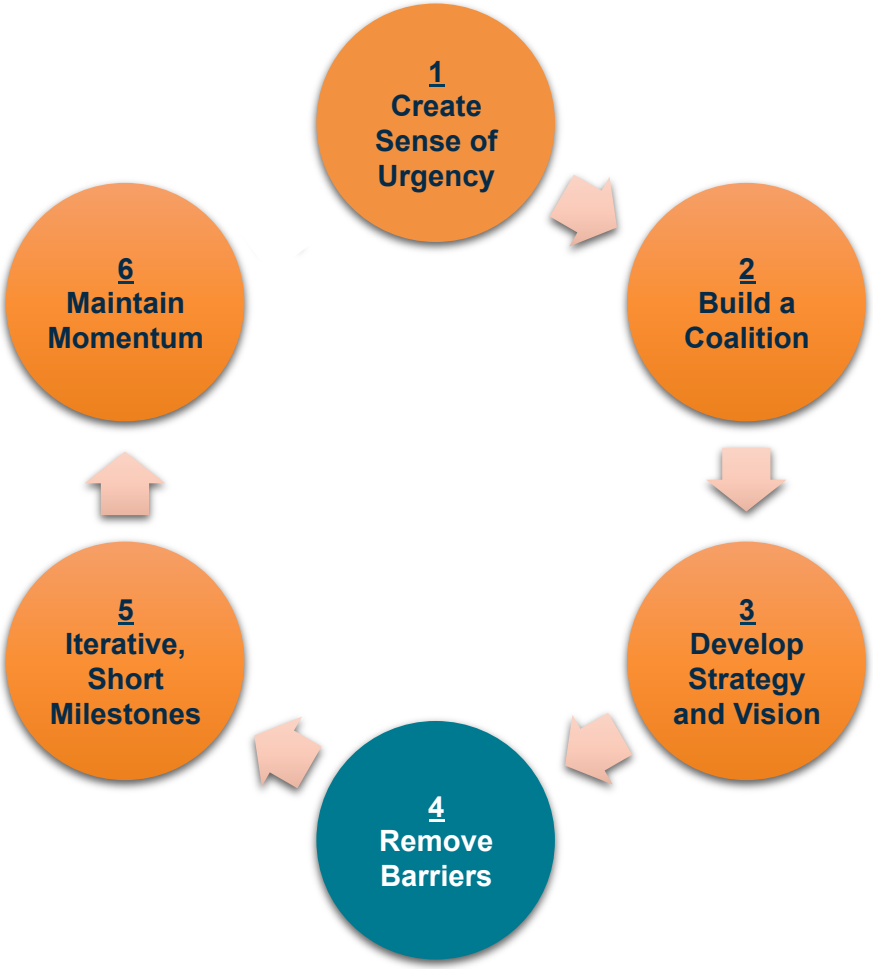
Develop a Strategy & Vision



- Develop a Point of View
- Create the Tech Vision
- Conduct tech assessments across the 4C model
- Identify opportunities
- Derive tech strategic objectives
- Formalize a tech roadmap

Purposeful and Deliberate is Key

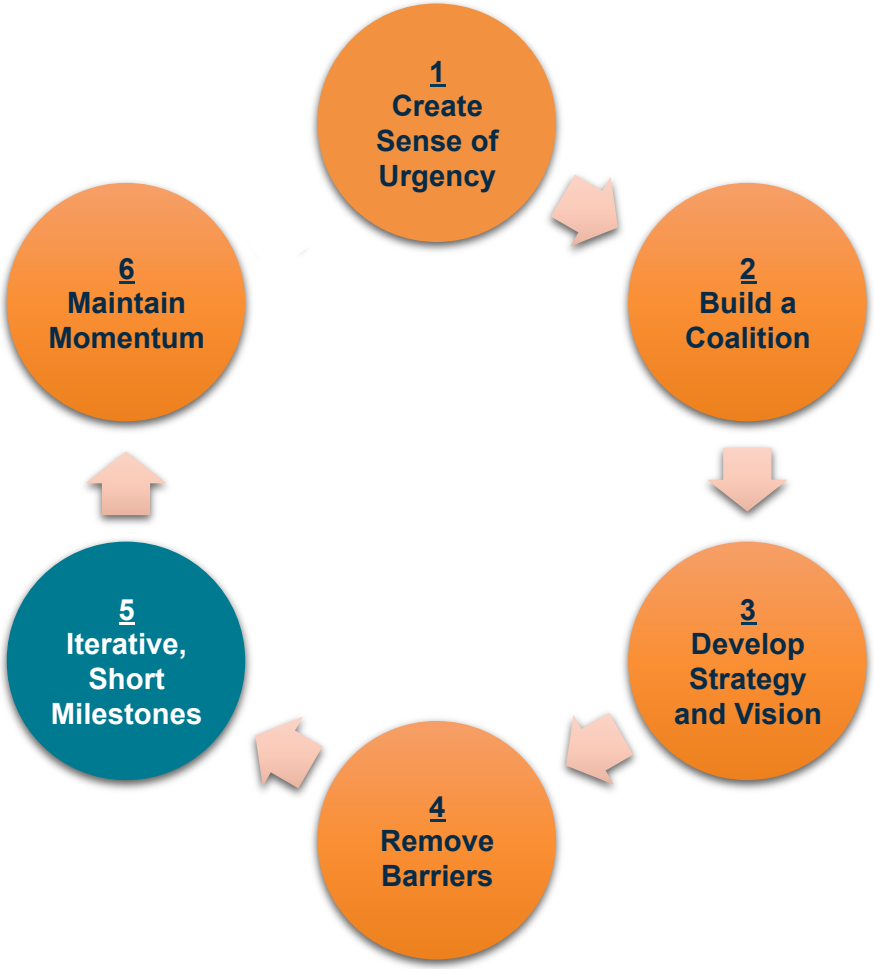
Remove Barriers



- Enable action
- Earmark proper funding
- Allow for adequate time
- Reduce the impact of other concurrent initiatives
- Equip stakeholders with resources to carry out the change management process successfully
- Do not overlook training (software orientation, user training, etc.)

Purposeful & Deliberate is Key

An Iterative Approach with Short-duration Milestones



- Create a change management plan that is measurable
- Allow for short-interval planning and sprints
- Schedule more frequent mini-milestones that roll-up into strategic milestones of the overall plan
- Accommodate an evaluation of how well the process is going and whether or not pivots/modifications to the plan are necessary

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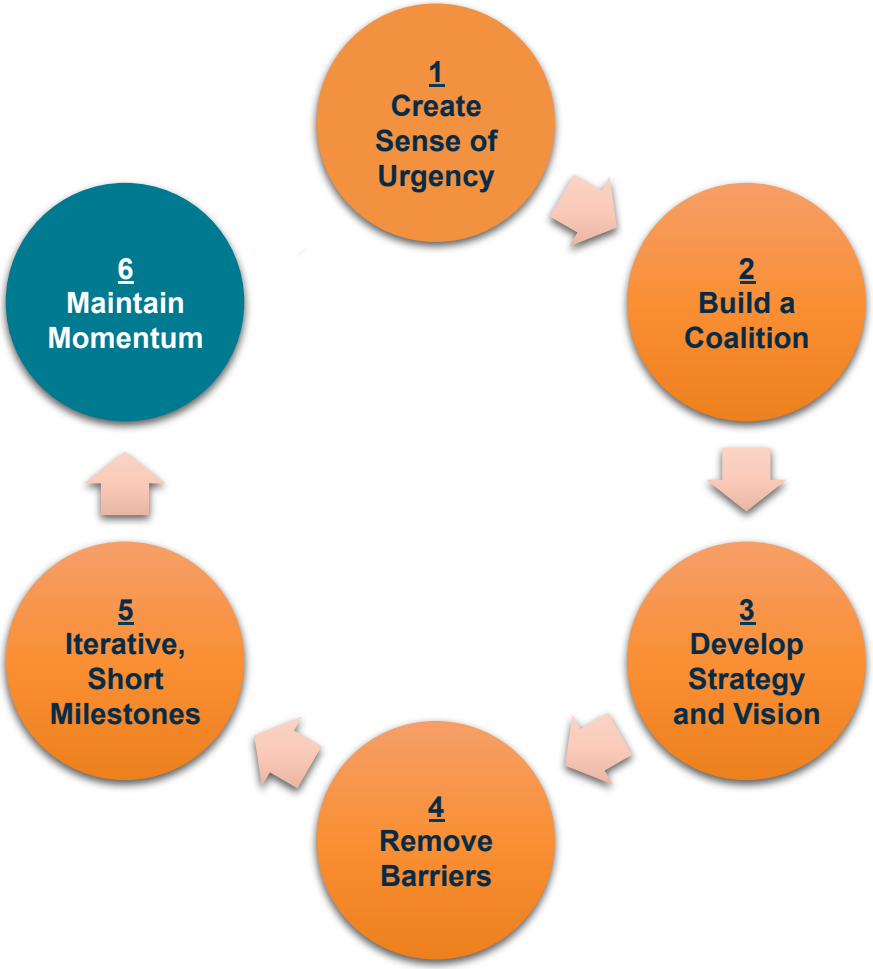
Maintain the Momentum



- Celebrate each mini-milestone and major milestone
- Add members to your stakeholder team when there is new interest from employees that can add value
- Encourage feedback
- Remind everyone where the company is on the change management path/schedule
- Be inclusive, focus on the positive impacts of the effort
- Promote the Envisioned Future State

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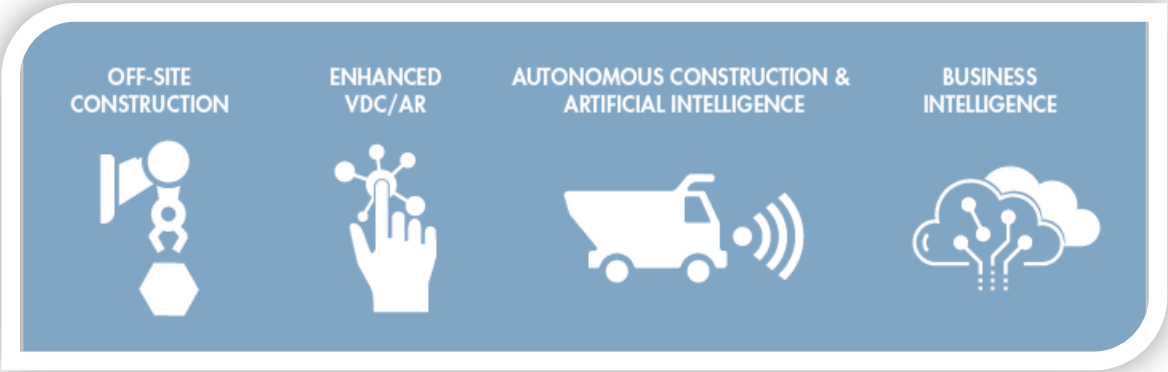
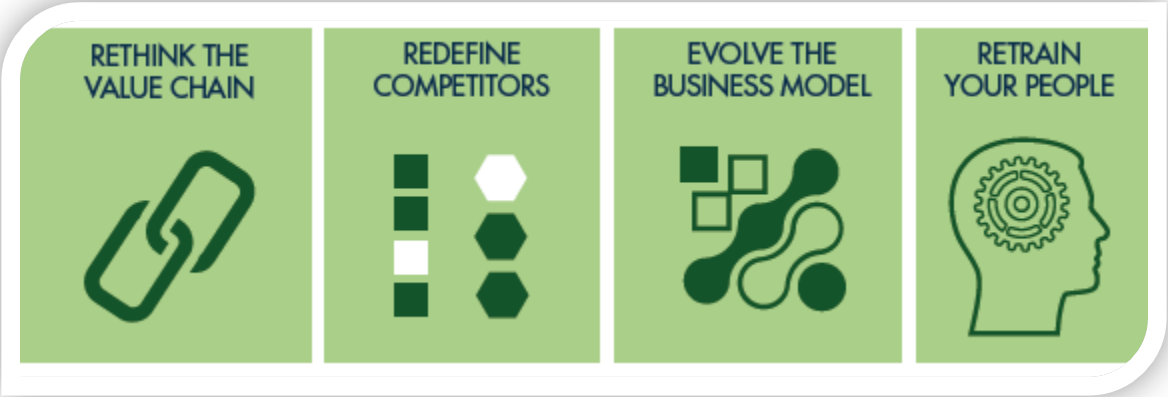
Prepare for the Future

The Future of Construction Requires Technology

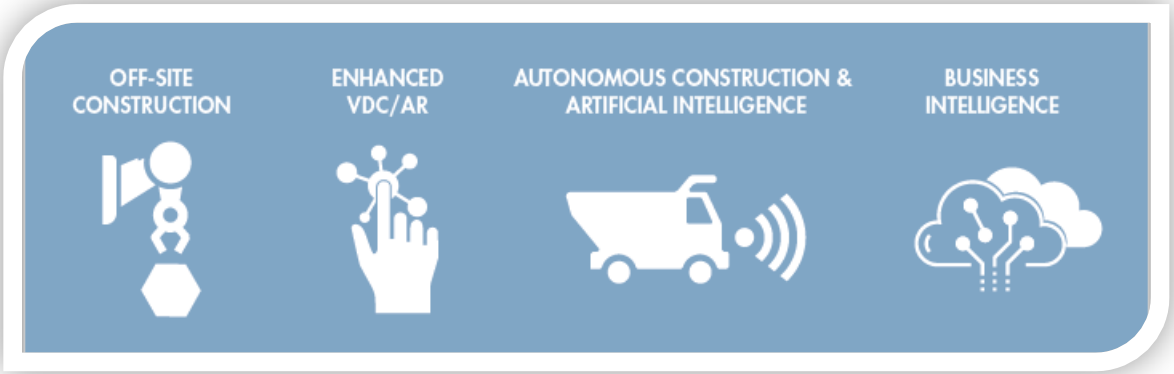
"The risk in remaining solely focused on the short term is that … firms may find themselves on the outside looking in if they fail to study external trends and adapt their business models and approaches." - FMI Quarterly Q1 2018

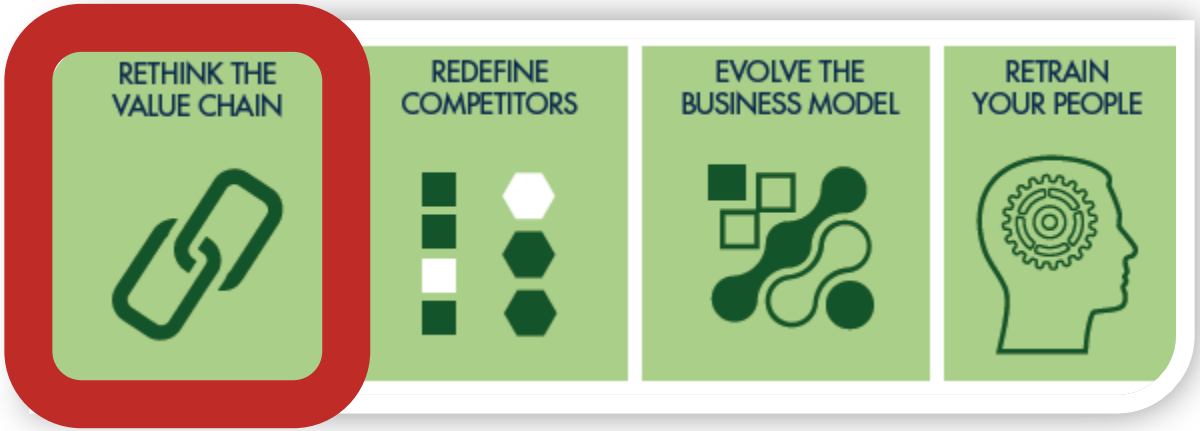




The Future of Construction Requires Technology

The changing value chain is just one of several reasons to consider how you integrate technology





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The Value Chain in the Future

- Value Chain: The series of activities and resources which are applied in a way to create a product or services that provides value to a customer or client.

Example Value Chain of Today

- Program/Project management
- Design/Engineering services
- Building products manufacturer
- Distributor
- Supplier
- Installer
- Equipment operators, technicians, mechanics
- Testing/Commissioning

Example Value Chain of Tomorrow

- Program/Project management
- Design/Engineering services
- Visualization/AR/VR Consultant
- Traditional building products manufacturer
- Off-site manufacturer (e.g. Prefabrication)
- On-site manufacturer (e.g. 3-D Printing)
- Surveillance systems (aerial photogrammetry, satellite imagery, terrestrial drones)
- Distributor
- Supplier/e-commerce procurement
- Installer
- Equipment and robotics operators, technicians and mechanics
- Testing/Commissioning

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Questions

Have a question for today's presenter?
Type your question into the chat feature!

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FMI Point of View on Technology

Creating competitive advantage for every client through their use of technology to support business strategy and operations.

Focus

We must answer the critical where to play & how to win questions by identifying the right approach for adopting technology as an enabler to outperform industry peers.

Choice

We will clearly frame choices around direction and culture. Leveraging technology depends as much on deciding what not to do. We must reconcile the emotions of emerging technology with the data-driven decisions and the business use case of technology investment and initiatives.

Impact

We have not succeeded if our work does not have a positive impact on the financial statements. Technology can not be about excitement with new capabilities. Our success means that every employee can effectively use the technology tools to improve their work and enable success.

Systems

We are not finished unless the client's organizational systems (strategy, governance, structure, rewards, performance management, leadership accountability mechanisms, technology etc.) are aligned to drive success of the broader company.

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FMI's Technology Practice

FMI's Technology Practice includes 3 areas to improve tech in your business

Tech Strategy

- Assess the company's technology current state, envisioned future state benchmark against the industry, determine gaps/redundancies and identify tech expectations of the market
- Establish a company point of view for how the organization will leverage technology
- Develop a deliberate plan for managing and pursuing technology initiatives that support business strategy and operations

Tech Adoption

- Facilitate technology solution selection process, site prep and change management
- Perform client process mapping, workflow and user permission requirements for customization of tech solution
- Develop and manage requirements traceability matrix documenting the business use case and translating to systems functionality requirements of a tech solution

Tech Advisory

- CTO and tech group advisory
- Business Intelligence Dashboard development and implementation
- Technology assessment including maturity assessment, user adoption, industry benchmarking, tech gap analysis
- Technology enablement and interoperability / systems connectedness
- Industry partnering
- Tech forums

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Jay has been in the engineering and construction industry throughout his entire career. He has industry experience as a construction project executive, corporate director of planning, design and construction for a healthcare system, founder and managing partner of a risk management tech startup company and as a valued business consultant.

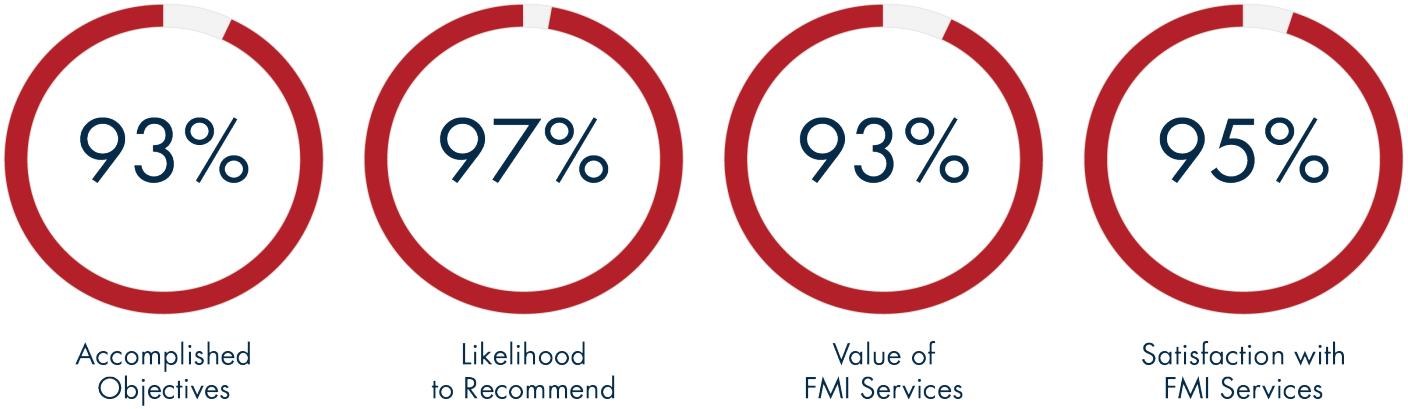
Jay has directly led the planning, design and construction of over $500 million dollars of commercial development. Additionally he has an extensive background in SaaS technology, supply chain management and operational logistics. Clients gain an advantage from Jay's expertise in strategic planning, leadership training, technology implementation and market strategy. He has provided services to commercial developers, general contractors & construction managers, specialty subcontractors, hospital systems & healthcare providers, government agencies, consumer products companies, software providers and others both in the United States and around the world. Jay's leadership in consulting has improved the strategy, operations and services of Fortune 500 companies, software providers, construction project owners, general contractors and trade contractors. Some of Jay's past work includes corporate strategy and visioning, supply chain optimization, software development traceability and technology positioning.

Jay is also and industry speaker, presenting on business best practices, critical facilities, owner-client relationships and digital/tech transformation particularly of companies in the engineering and construction industry. Through his speaking engagements, Jay delivers information and case studies that allow his audience to understand how they may adopt insight and industry capabilities into their businesses. Jay's thought leadership has been included in many of the industries most prominent publications.

Jay earned a bachelor's degree in construction management from SUNY ESF at Syracuse University and a Master of Business Administration from Emory University.

About FMI

For over 60 years, FMI has been the leading **management consulting and investment banking**† firm dedicated exclusively to **engineering and construction, infrastructure and the built environment.** It is the goal of everyone at FMI to improve the quality and depth of our client relationships and to create loyal, enduring relationships. We are committed to the success of our clients. **We stake our reputation on it every day.** That is why we constantly monitor what our clients think of our services and the professionals delivering our services. **For over a decade,** FMI has conducted client evaluations to assure that our services meet the needs of our clients, achieve the results proposed and deliver high value in a professional and effective manner.



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