



# The Value of Using Business Capabilities to Guide Your IT Evolution

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# Introduction



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# The Value of Using Business Capabilities to Guide your IT Evolution

- **There's a difference between being busy and being productive.** Creating diagrams and updating processes can become shelfware if they do not show how they create a business outcome, or worse yet, after many iterations they may end up having nothing to do with overall enterprise strategy.
- Get out of this sinkhole and learn how to use business capability maps to guide your IT evolution.
- Design architectures that specifically **improve a measure of a capability**, stay ahead of Agile developments, and ultimately ensure resilience.

# Today's topics



- Understand strategic objectives using **business architecture**
- Plan business capabilities for each **transformation stage**, along with business objectives.
- Align IT projects to **business goals**.

# Tomorrow's organization will be designed for speed

“Change will never again be this slow. CEOs are telling us that there is no turning back. They have seen the art of the possible and want to lock it in”

– COVID Implications on Business July 2020, McKinsey

## Fit for purpose operating model

- Flatter organizations with streamlined decision rights
- Faster information flows powered by embedded analytics
- X-functional teams collaboration
- Flexible working, remote/in-person
- Agile, resilient talent

## with improved outcomes...

- Faster speed to market
- Increased customer responsiveness
- Greater efficiency
- Stronger performance and employee satisfaction

Source:  
<https://www.mckinsey.com/~/media/mckinsey/business%20functions/risk/our%20insights/covid%2019%20implications%20for%20business/covid%2019%20july%209/covid-19-facts-and-insights-july-6.pdf>

# Key Challenges



## Business Strategy

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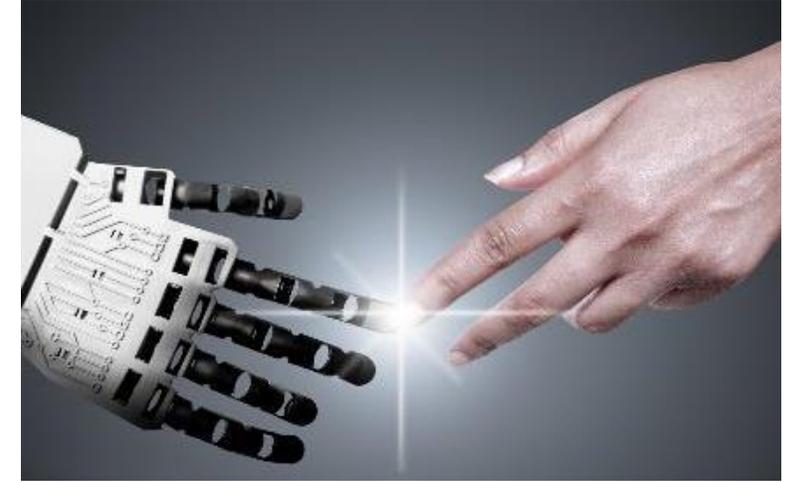
- IT departments don't always have clear visibility into the business strategy, leading to a misunderstanding of business decisions
- The business strategy is evolving due to constantly changing industry and marketplace trends



## Business Roadmap

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- The business roadmap is unknown or insufficiently clear
- IT departments don't know which business capability evolutions are planned and how they fit with the business strategy



## Business-IT Alignment

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- The planning of IT resources is not tied to business objectives leading to wrong IT investments.
- The IT roadmap fails to keep pace with changing business objectives

# Business Architecture



*"A blueprint of the enterprise that provides a **common understanding of the organization***

*and is used to **align strategic objectives and tactical demands.**"*

Source: Business Architecture Guild

# Capability

## Defining the Business Capability

A business capability, or simply a “capability”, defines **what a business does**. It does not communicate or expose where, why, or how something is done – only what is done.

Specifically, the business capability is **“a particular ability or capacity that a business may possess or exchange to achieve a specific purpose or outcome”**.

This phrasing is the standard definition for a capability and has been in common use for many years in the business architecture community.

Source: BIZBOK® Guide – V9 – Business Architecture Guild

# Human Example: Ability to Walk (bipedal locomotion)



# Human Example: Ability to Walk (bipedal locomotion)

Capabilities are Stable



Introduction of New Capability

## Agreement Management

Agreement Access Management

Agreement Compliance Determination

Agreement Definition

Agreement Information Management

Agreement Lifecycle Management

Agreement Matching

Agreement Portfolio Management

Agreement Preference Management

Agreement Risk Management

Agreement Structuring

## Brand Management

Brand Awareness Determination

Brand Definition

# Common Understanding

- Business Language
- Clear Description
- Understood by Everyone
  - Executives
  - Business
  - Technology
  - etc.

Ability to articulate, establish, and create the brand in a manner which demonstrates to customers what it does, what it stands for, and why it is different from its competitors.



## So What? (related to IT Evolution)

- Unconstrained Thinking
- When you consider the 'What', independent from the 'How', 'Why', etc. you are able to consider a broader range of options (or solutions).
- Strategic Vision and IT Evolution should be focused on what is necessary, not on current constraints.

(constraints would come into play later, when considering scenarios)

# Space Pen

- When considering the needs of an Astronaut, it was determined that:
  - For a pen to work in space it would require special materials and pressurization to overcome the environmental factors in Space.
- 'What' wasn't considered alone, but with details about 'How' that constrained thinking.



False

<https://www.snopes.com/fact-check/the-write-stuff/>

# Strategy & Capabilities



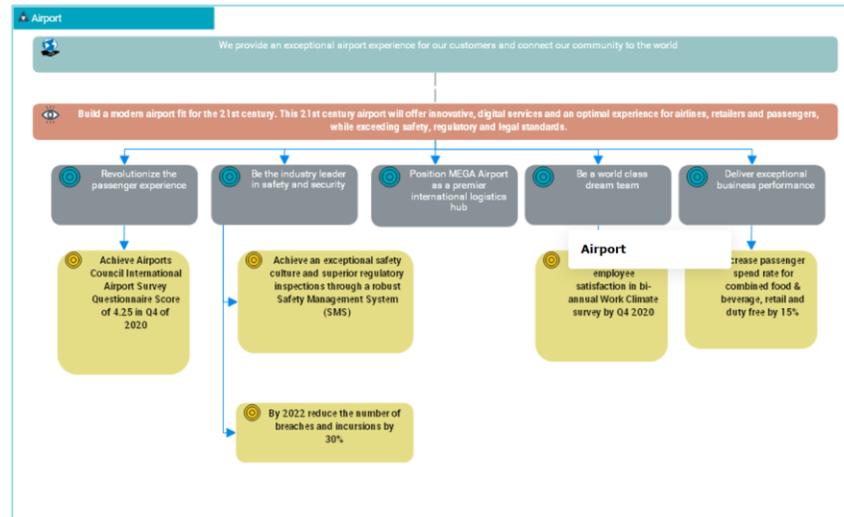
# Tesla Example: Strategy without Capability Assessment



- Was it literally humans that were needed (more random people)?
- Or the Capabilities those humans brought to the company?
- (and that were originally overlooked when developing the strategy)

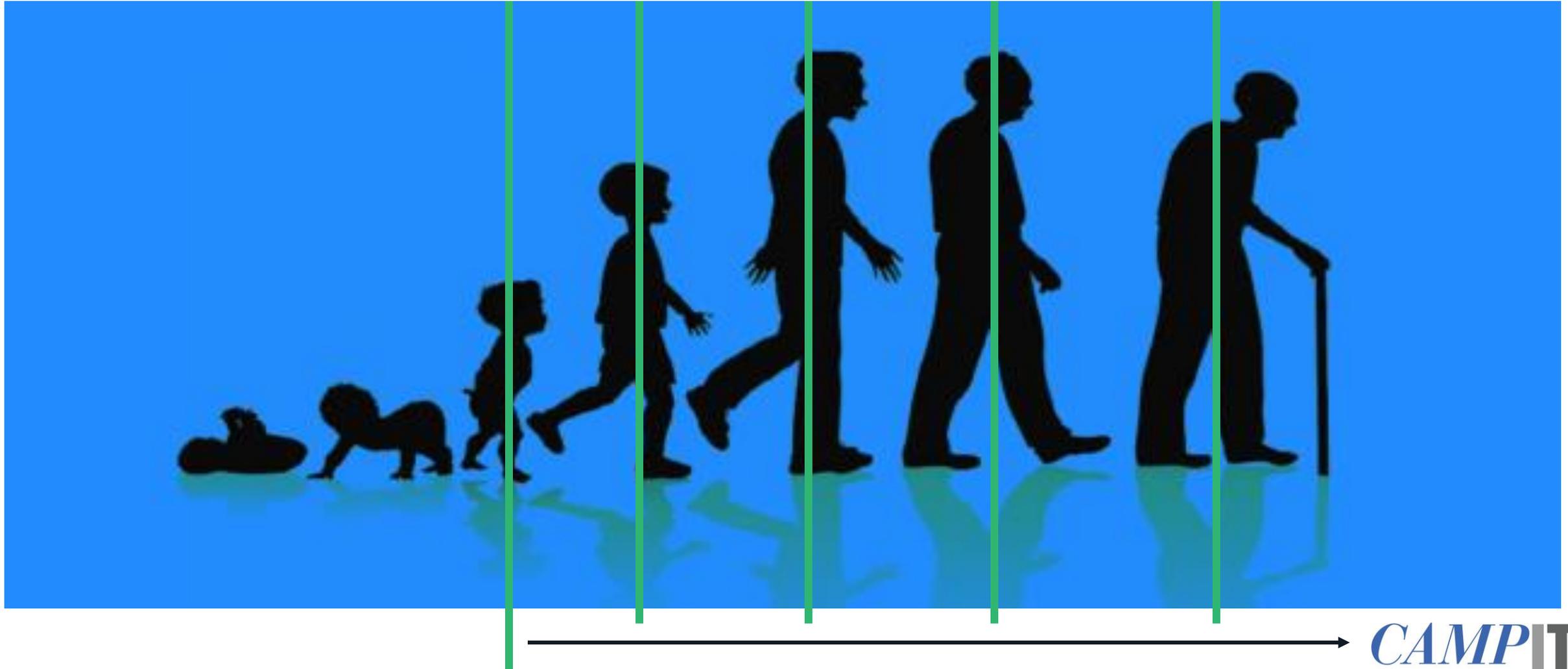
# Strategy & Capabilities

- Understand the Strategy of the company, in a manner that can be communicated to others to ensure alignment.
  - Be sure to do this in an efficient manner
- Review or Assess Capabilities in the context of that Strategy.
  - Ensure you have the capabilities you need to execute the strategy
  - Raise a flag if there are gaps that will impact the successful achievement of expected outcomes



# Human Example: Ability to Walk (bipedal locomotion)

Revisiting this model. Is walking the same across the timeline?



Introduction of New Capability

# Outcomes & Metrics



- What if we were to consider the Capability at a point in time?
- Could we add greater specificity to our assessment of that Capability?
- Could we intersect Capabilities with Objectives to enable us to define specific outcomes?
  
- Example (for bipedal locomotion):
  - Speed
  - Stamina
  - Stability

# Targeting Outcomes



- Could we plan for a Marathon?
- What would that entail?
  - A certain sustainable (or average) speed
  - A certain stamina, to ensure the runner would make it the 26.2 miles
  - A level of stability, to keep upright and moving in the right direction
- What would it take to get there?
- Is it the same for each individual?
- When is the marathon?

# Space Pen (revisited)

- Let's take this example further:
  - We already have the capability to write (document manipulation, notation creation, etc.)
  - We would like to enhance it.
  - Perhaps a metric is permanence or mutability.
- We can compare the option for using a pencil to that of the originally proposed pressurized pen, etc.
- We can also consider completely new alternatives to solve this problem
- When do we need it?



False

<https://www.snopes.com/fact-check/the-write-stuff/>



## Focused Ideation

- When you define a measurable outcome expected from the company, it is more meaningful to solicit ideas.
- This also increases the number of ideas that will be adopted (as they were solicited to achieve a specific outcome).
- Motivation and participation grow as a result.

# Focused Ideation Example

- We want to increase revenues by increasing our presence. In order to do that, we hope to evolve our Pizza Delivery.
- Current metrics utilized: Distance, Time, Freshness (temperature)

Evaluation context : Pizza & CO [as is]

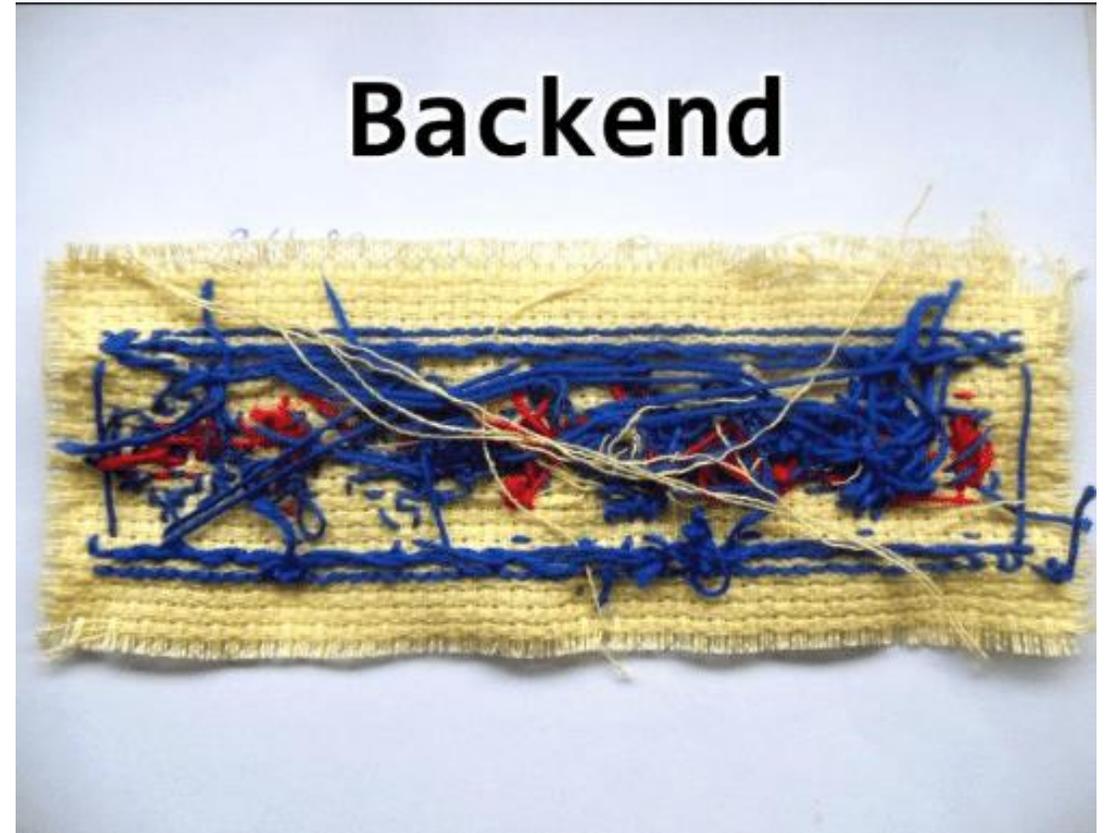
	 Business Value	 Capability Efficiency	 Capability Effectiveness
  Pizza & CO - Traditional Pizza Capability Map			
  Pizza Preparation	 4 - Limited impact	 3 - Somewhat Efficient	 3 - Somewhat Effective
  Cooking of Pizza	 3 - Moderate Impact	 4 - Slightly Efficient	 3 - Somewhat Effective
  Food safety and quality assurance	 4 - Limited impact	 3 - Somewhat Efficient	 4 - Slightly Effective
  Sanitation	 3 - Moderate Impact	 4 - Slightly Efficient	 3 - Somewhat Effective
  Baking of Pizza	 5 - Negligible impact	 1 - Extremely Efficient	 2 - Very Effective
  Pizza Delivery	 3 - Moderate Impact	 4 - Slightly Efficient	 3 - Somewhat Effective

It isn't always pretty

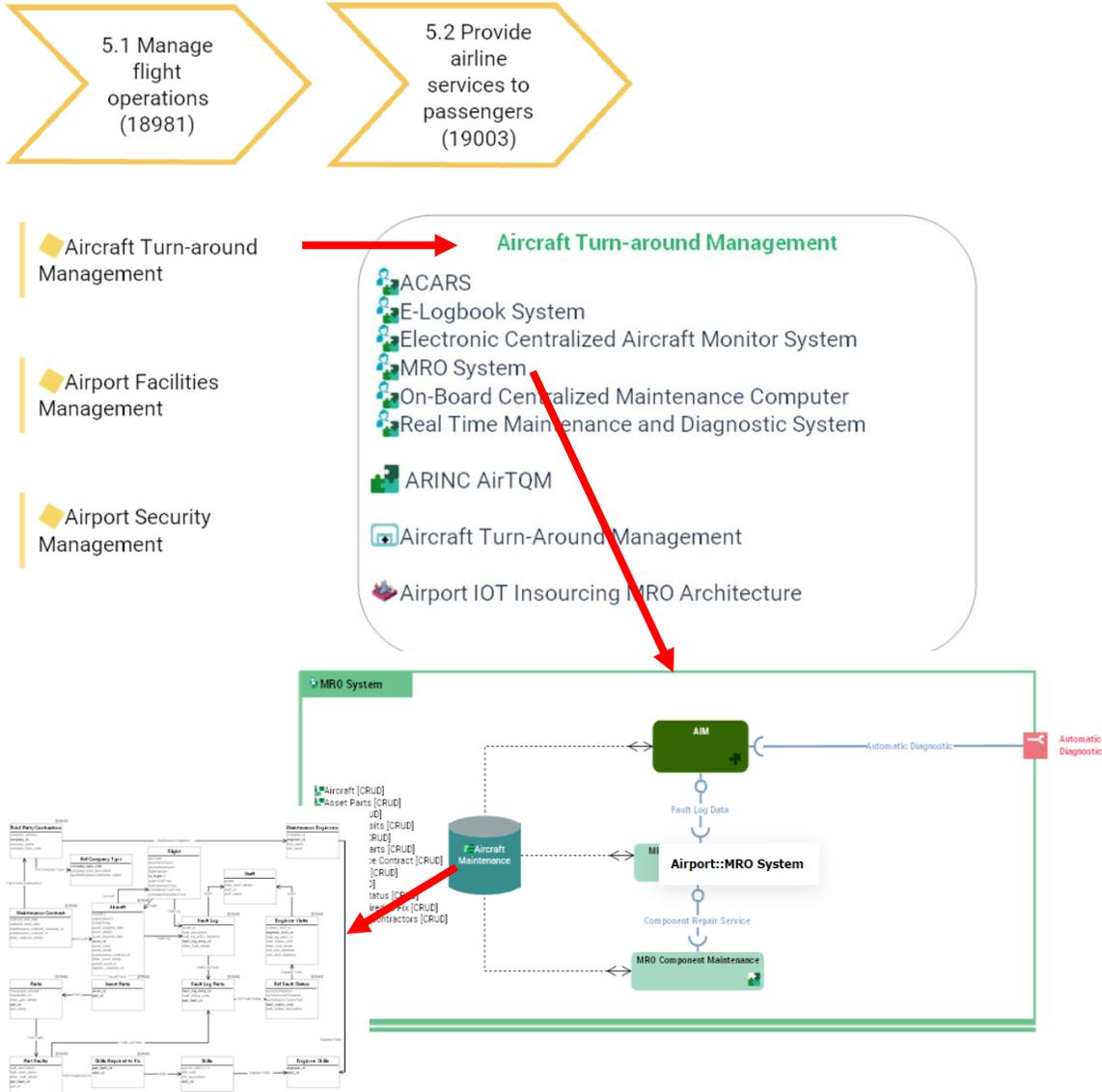
**Frontend**



**Backend**



# Example Models



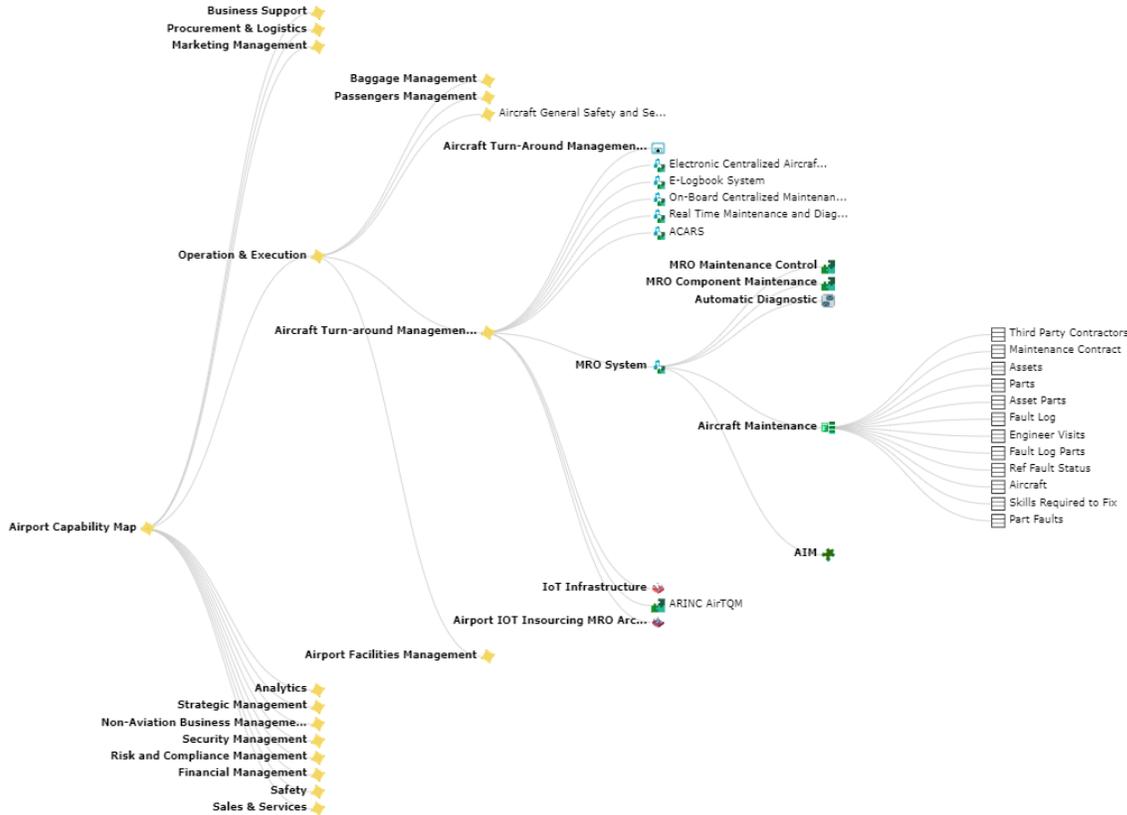
Here is a sample of how the information may come together:

- Business Models (Value Stream)
- Decomposed into Business Capabilities
- Business Capabilities are aligned to the architectural elements that implement them.
- Application System (as an example) is decomposed into its components
- Data Store decomposed into the data model (or information model)

This uses a Building Block approach, where you can leverage the topics previously mentioned to ensure alignment of a transformation.

# Example Models

Here is a sample of how the information may come together:

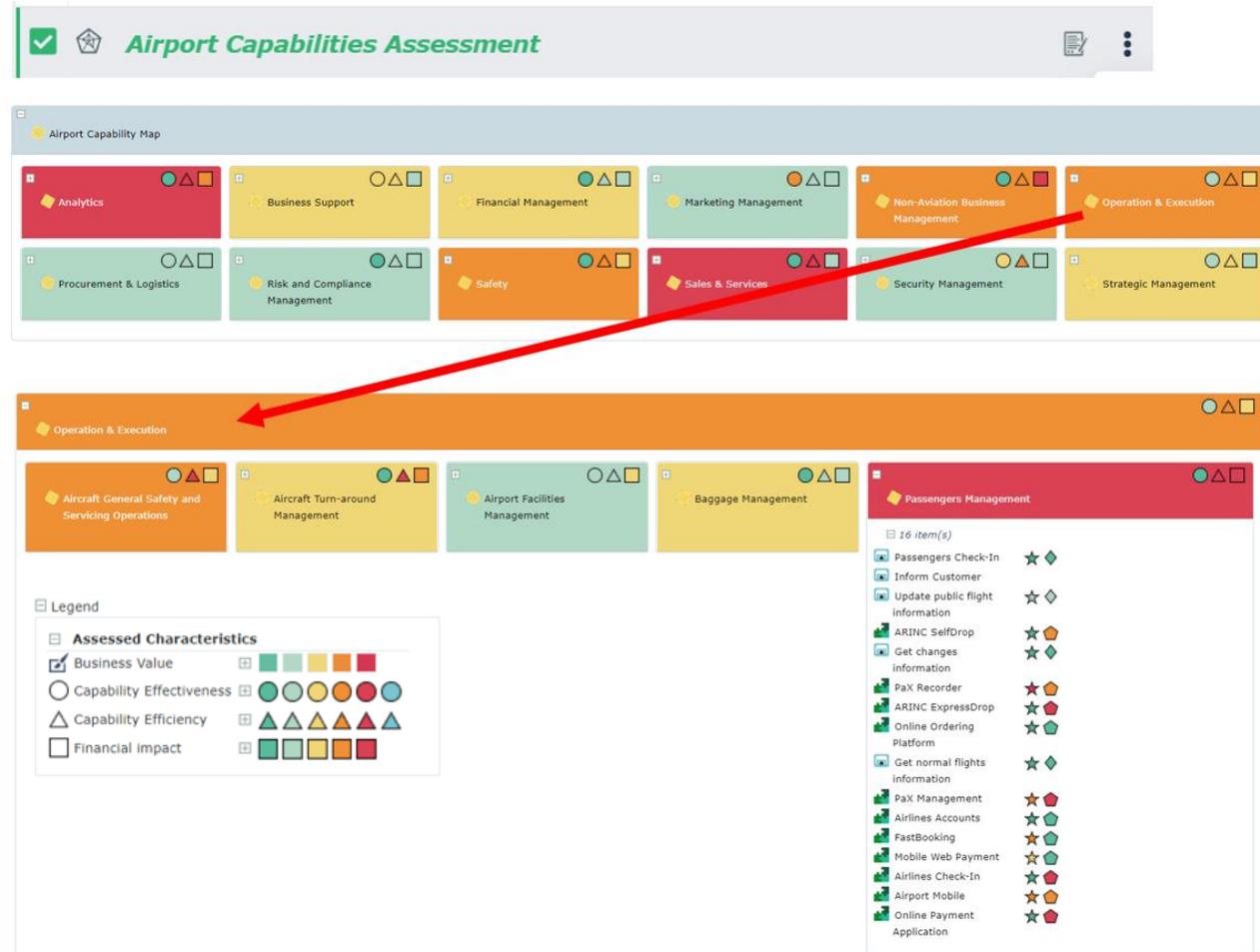


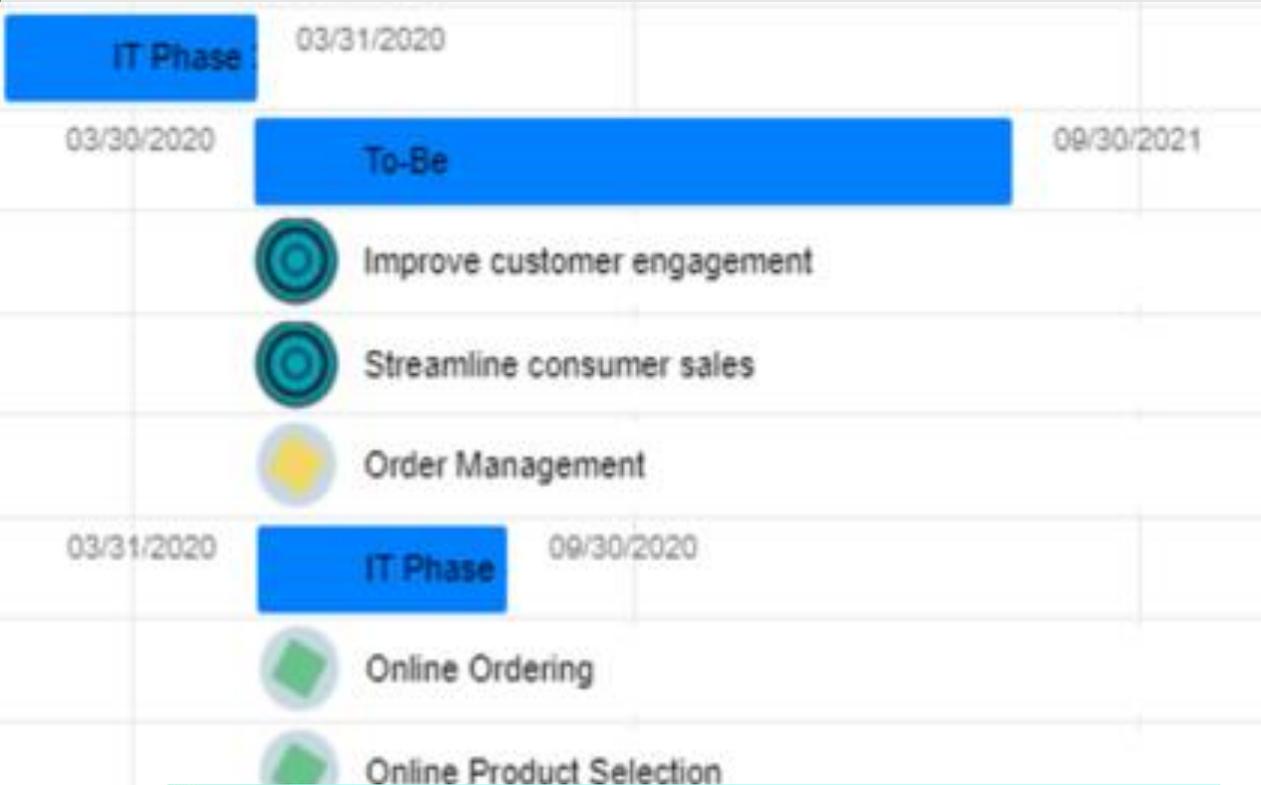
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# Prioritization for Change

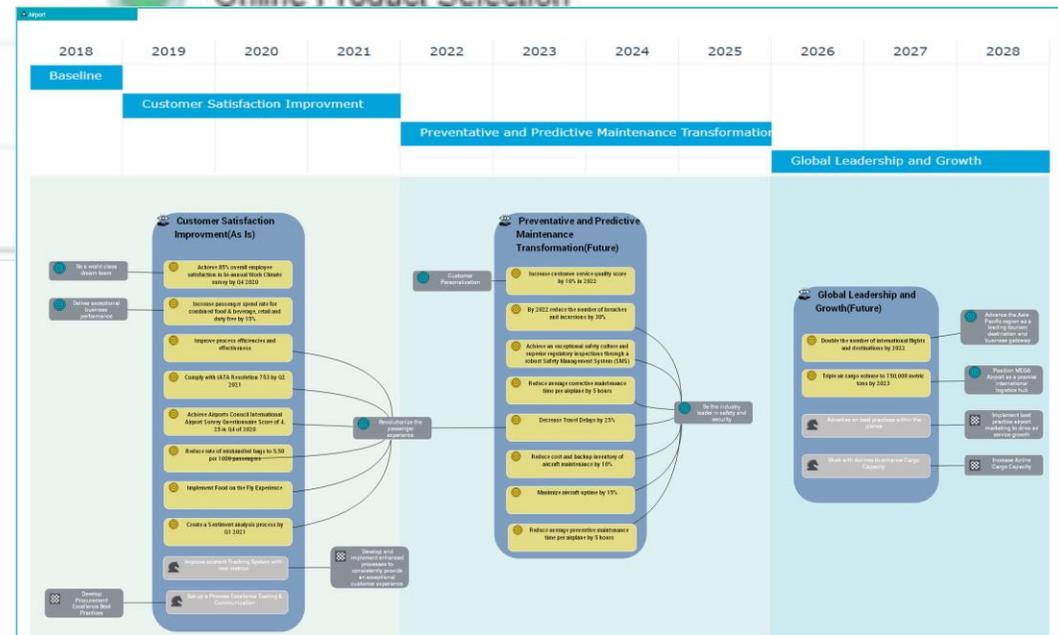
- Capabilities can be assessed with multiple criteria
- This assessment can extend to the concepts the implement the capability.
- Use this style of view to identify which capabilities require a higher priority for transformation than others.





# Create an Enterprise Stage timeline

- Define the planned stages of evolution for your business.
- The time boundaries are up to you, and should be aligned to the strategy of the company
- Then align the objectives and supporting capabilities that will be required for achieving the strategic goals.



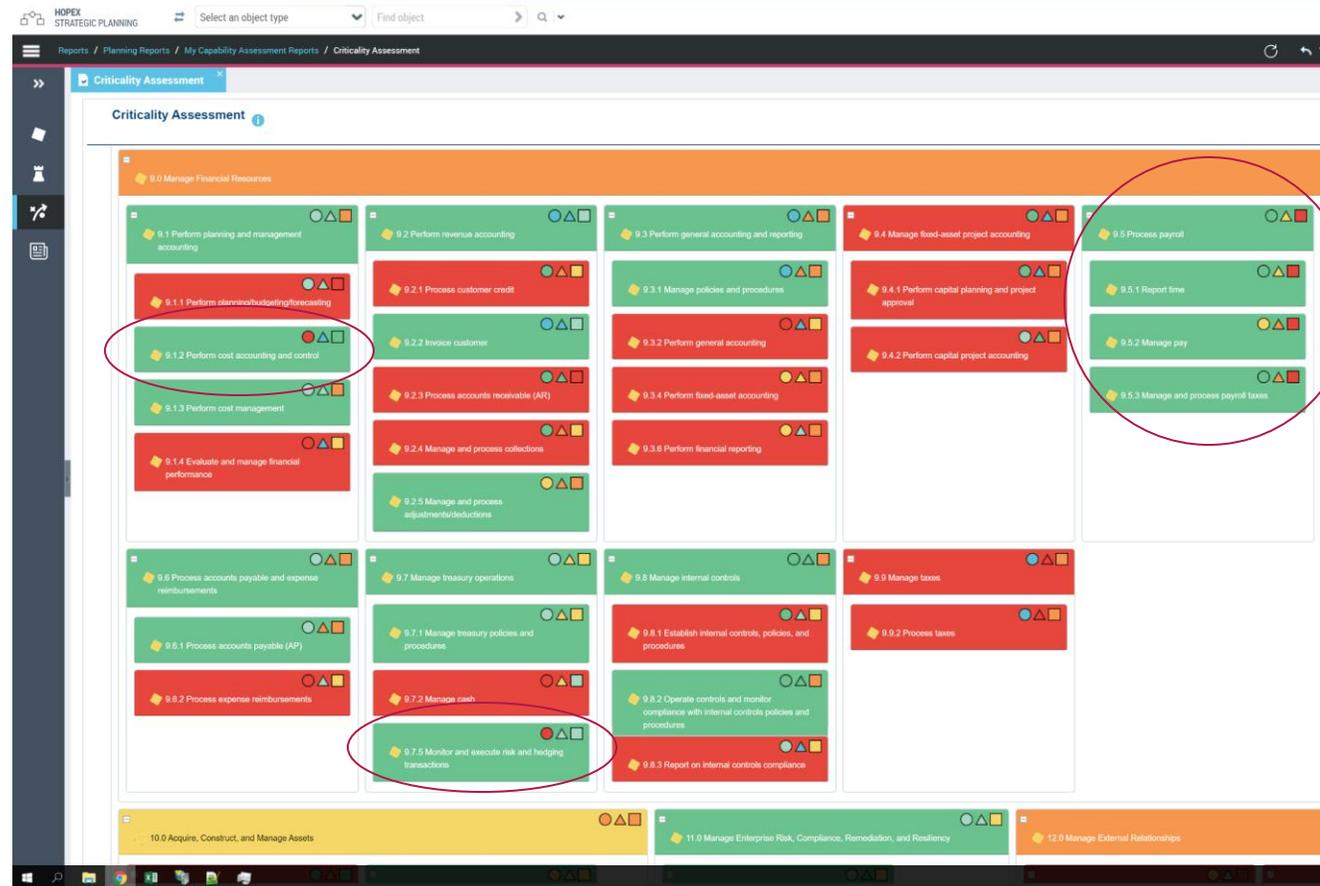
# Tip: Use a non-linear stage for resiliency planning



## Assess Business Criticality

- Identify the Business Capabilities that would be Critical to sustain during a crisis, within a Safe Mode Enterprise Stage.
- Compare the Criticality to the Efficiency, the Cost, and the Technological Stability.
- Focus Transformation efforts on Critical Capabilities with low efficiency, high cost, or low technological stability.
- Easily understand the technologies required to support this effort.

## CAPABILITY CRITICALITY ASSESSMENT



■ Critical Capability  
■ Non-Critical Capability

□ Cost – Red is MOST Expensive  
○ Technology Stability – Red is LEAST Stable  
△ Efficiency – Red is LEAST Efficient

# Tip: Use a non-linear stage for resiliency planning



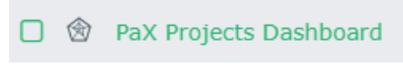
## Identify your needs

- For the key capabilities, identify key KPIs and metrics for the “business as usual” situation as well as for the “Crisis” situation
- This is the starting point of the business needs analysis, what is the minimum level required to go through the crisis
- This exercise should be performed before the crisis happens. (although it is still valuable during a crisis)

## KPI BY BUSINESS CAPABILITY MANAGEMENT

Capability Gap Analysis			
05.2.1 Initiate service delivery	Average lead-time in days between consumer order and the first accepted delivery window	As-Is	< 7
		Safe Mode	< 21
05.2.2 Execute service delivery	Percentage of delivery orders rescheduled or modified prior to delivery	As-Is	< 5
		Safe Mode	< 20
05.2.3 Complete service delivery	Percentage of consumers who paid a fee for an expedited or priority delivery service level	As-Is	< 5
		Safe Mode	< 10
05.2.3 Complete service delivery	Percentage of large/bulky deliveries refused	As-Is	< 5
		Safe Mode	< 5
05.2.3 Complete service delivery	Percentage of deliveries requiring post-delivery follow-up or issue resolution	As-Is	< 5
		Safe Mode	< 15

# Project Portfolio

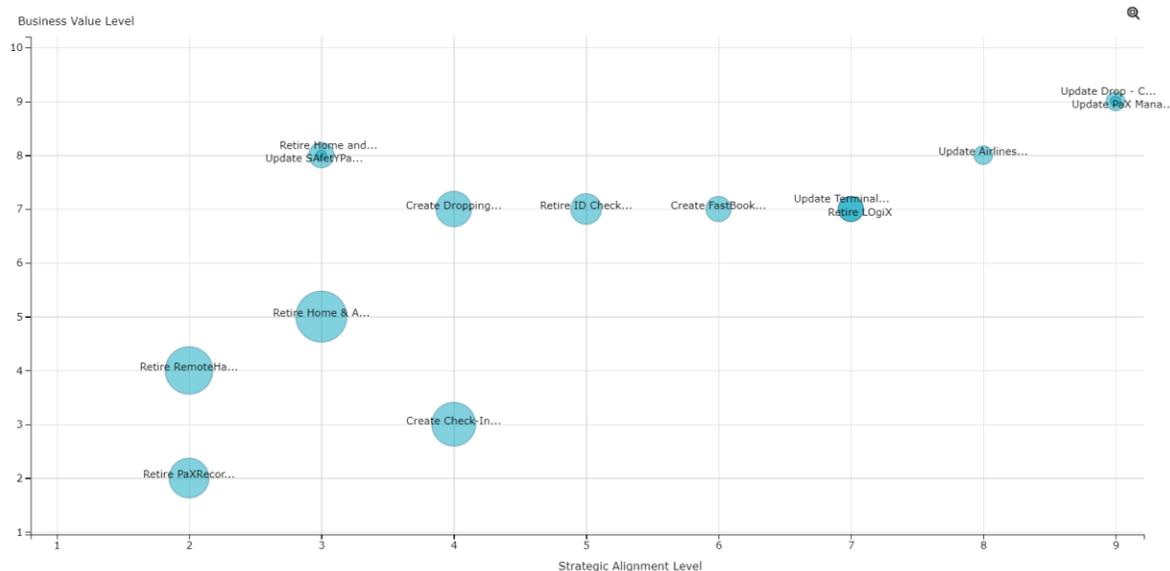


	Strategic Alignment Level	Business Value Level	Risk Level	Cost Level	Budget	Benefits	Return on Investment
Update Local StaffGrant - Candidate	10 - Very High	10 - Very High	6 - Medium	8 - High	€100,000.00	€111,600.00	12%
Update PaX Management - Candidate	9 - Very High	9 - Very High	7 - High	9 - Very High	€600,000.00	€1,034,416.00	72%
Create TerroristTracker	10 - Very High	10 - Very High	8 - High	10 - Very High	€1,500,000.00	€1,945,856.00	30%
Update Airlines Accounts - Candidate	8 - High	8 - High	8 - High	9 - Very High	€1,000,000.00	€1,171,084.00	17%
Retire LOGiX	7 - High	7 - High	8 - High	8 - High	€2,000,000.00	€2,804,708.00	40%
Update Drop - Candidate	9 - Very High	9 - Very High	10 - Very High	10 - Very High	€1,200,000.00	€3,594,482.00	200%
Retire ID Check System - Candidate	5 - Medium	7 - High	4 - Low	7 - High	€320,000.00	€378,163.00	18%
Create FastBooking - Candidate	6 - Medium	7 - High	8 - High	8 - High	€500,000.00	€856,464.00	71%
Create Dropping System - Candidate	4 - Low	7 - High	5 - Medium	6 - Medium	€2,000,000.00	€5,700,286.00	185%
Retire Home & Away Policy Administration - Candidate	3 - Low	5 - Medium	4 - Low	2 - Very Low	€1,500,000.00	€1,829,382.00	22%
Create Check-In System - Candidate	4 - Low	3 - Low	3 - Low	4 - Low	€3,000,000.00	€15,530,033.00	418%
Retire RemoteHandling	2 - Very Low	4 - Low	3 - Low	3 - Low	€120,000.00	€374,999.00	212%
Retire PaXRecorder - Candidate	2 - Very Low	2 - Very Low	6 - Medium	5 - Medium	€200,000.00	€282,240.00	41%
Update SAfetVPax	3 - Low	8 - High	8 - High	8 - High	€1,500,000.00	€1,933,722.00	29%
Retire Home and Away Travel - Candidate	3 - Low	8 - High	5 - Medium	10 - Very High	€1,200,000.00	€2,162,611.00	79%
Update TerminalLink	7 - High	7 - High	4 - Low	8 - High	€5,000.00	€5,973.00	19%

- Assess projects according to various criteria: financial, impacts on existing architectures, risks, business value, technology obsolescence

- Align projects to Enterprise Stages in accordance to Capability Evolution

- Ensure Project Teams are fully aware of the expected Business Outcome (Objectives, Exhibited Capabilities, and metrics)



# Chapter Summary



# How to build a strong enterprise roadmap



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## Capture Business Strategy

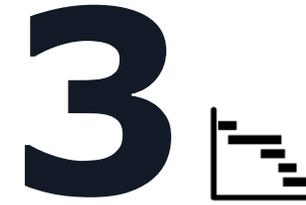
- Capture the company's vision, **objectives, strategy and tactics**
- Map business capabilities. **Plan capabilities** with regards to strategic objectives and the business roadmap
- **Build the enterprise plan** by positioning transformation objectives and business capabilities



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## Identify IT Projects

- **Map the current IT environment** to business capabilities as a starting point
- **Perform gap analysis** and identify pieces of the IT environment that should be redesigned to support each transformation stages



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## Build IT Roadmap

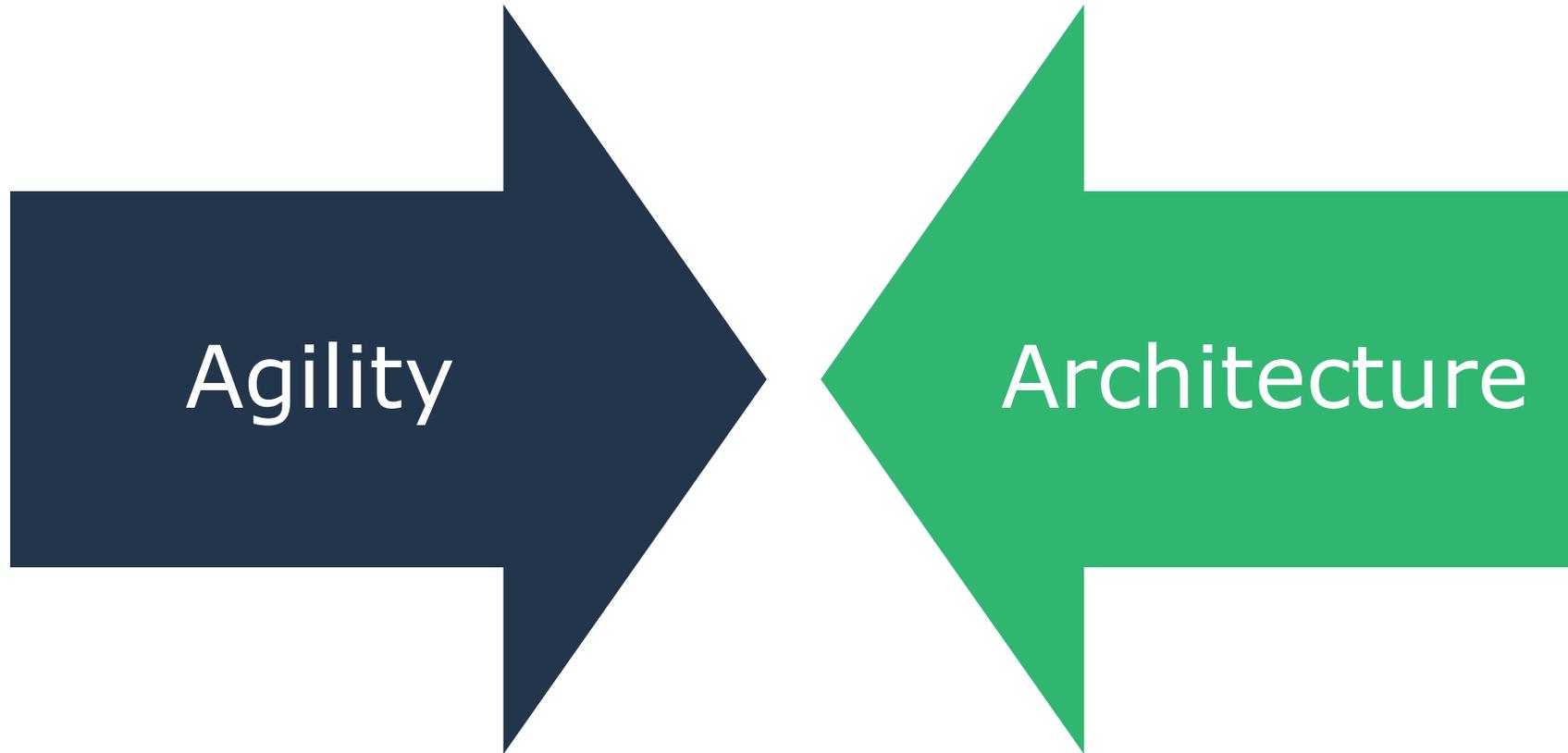
- **Build the roadmap by prioritizing projects** based on various factors, including a financial perspective and architectural impact
- Monitor progress, track business changes, assess their impact, and **continuously adjust the roadmap**

## Agility ...

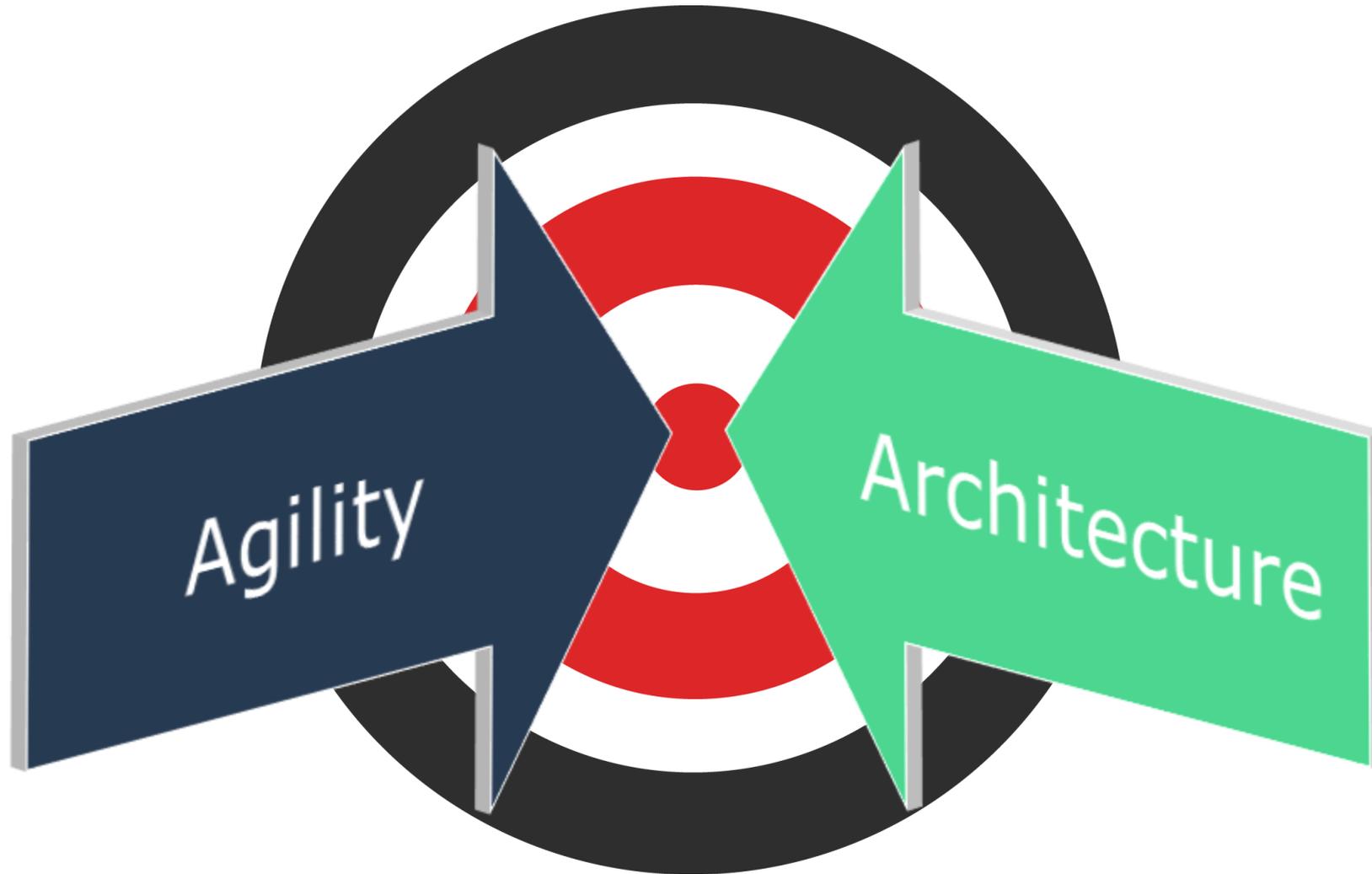
Where does agility fit  
into this conversation?



How do we reconcile this seemingly impossible impasse?



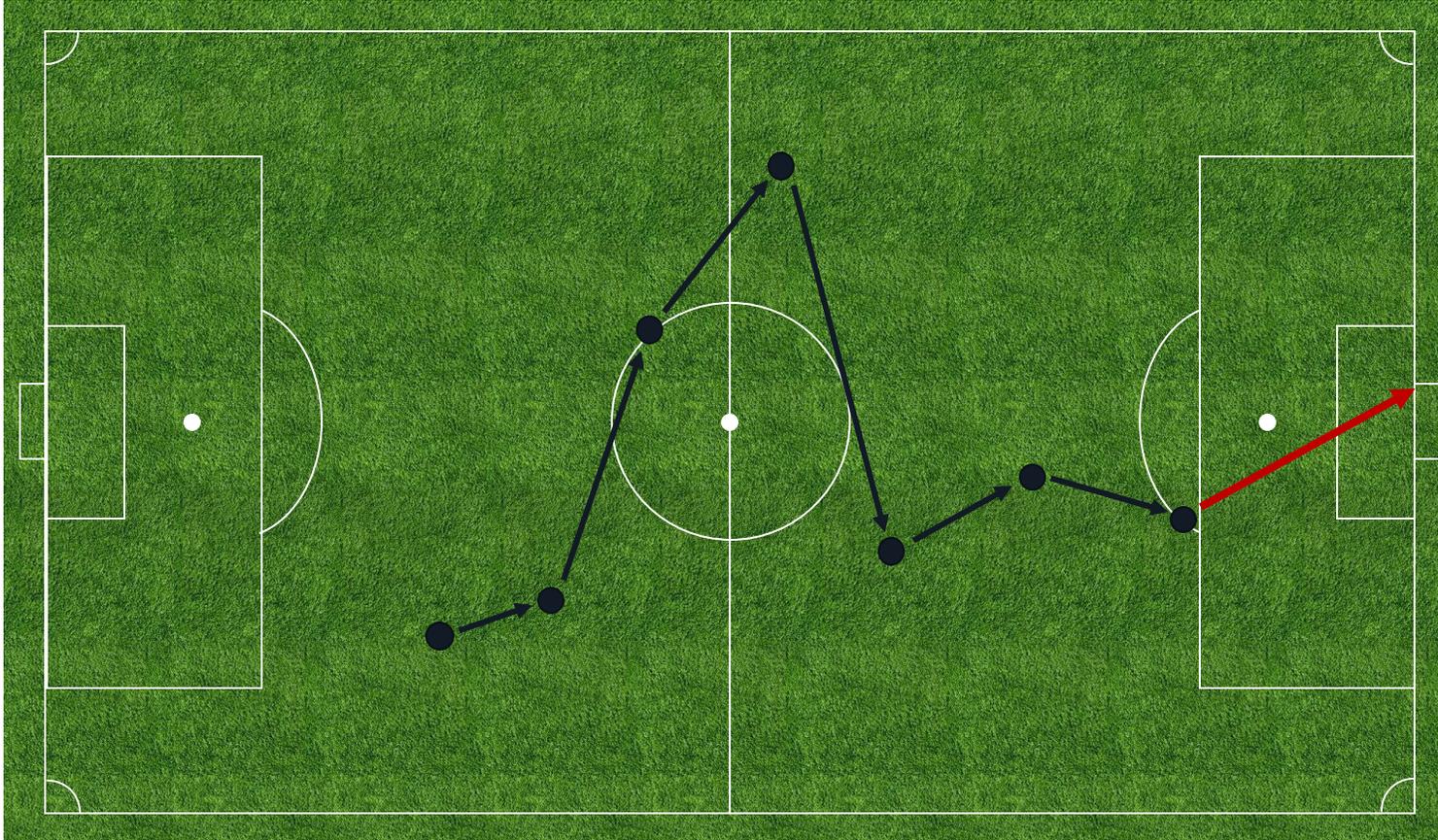
# Perspective



**How do we clarify  
the alignment?**



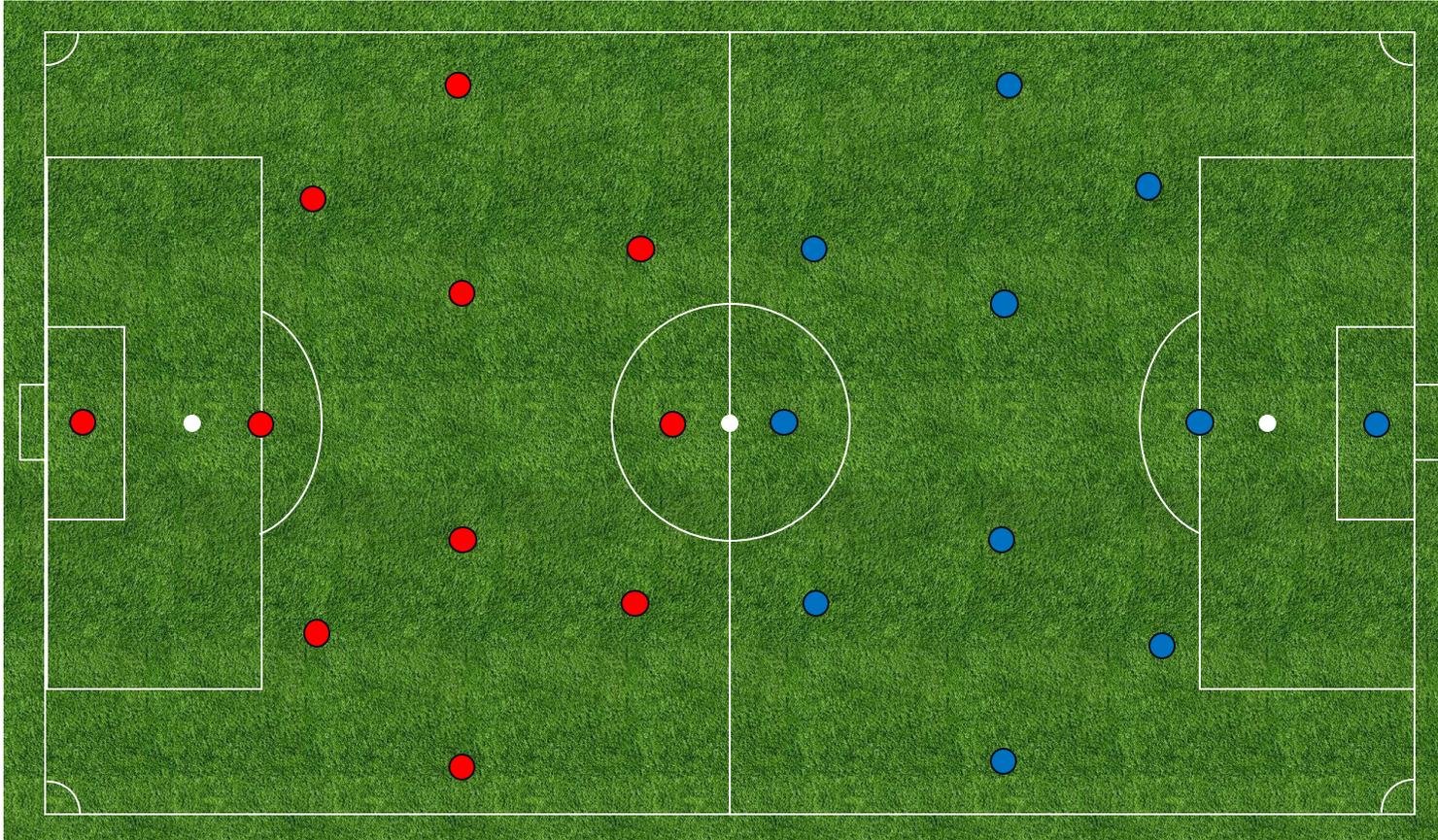
# Sport Analogy – Agile - Agility



An agile player on the field, needs to be able to freely pivot when necessary, on their way to an established goal.

That player does not want anyone to get in their way, especially not someone who isn't seen as an equal player.  
(or not a player in the same game)

# Sport Analogy – Architecture - Adaptability



Once we zoom out, from focusing on the single agile player, to the entire team, we can understand better the two roles.

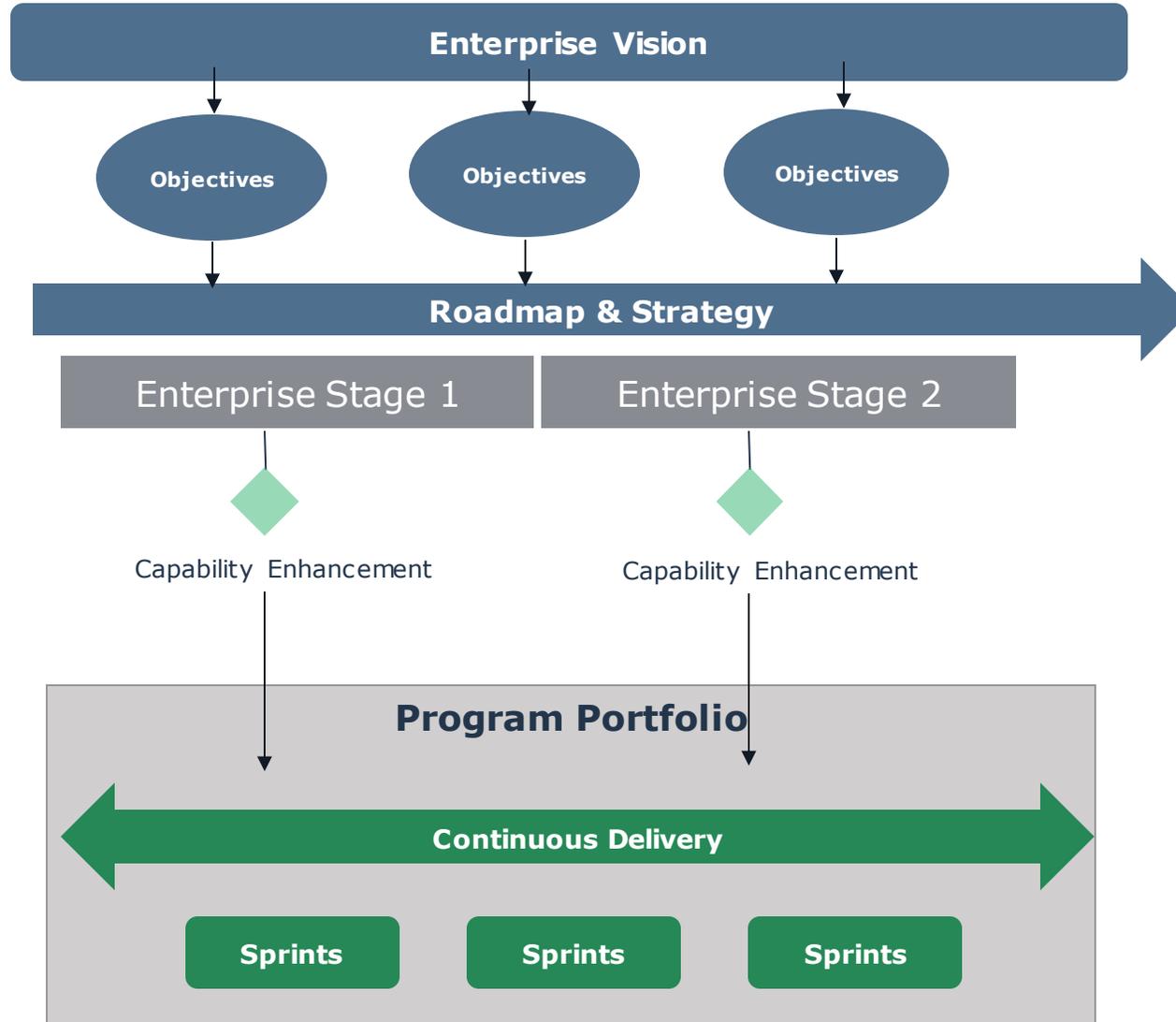
Each player needs to be agile in their ability to achieve their expected outcomes.

For a greater chance at beating another team, planning, preparation, and the choice of plays is established by someone looking across players and teams.

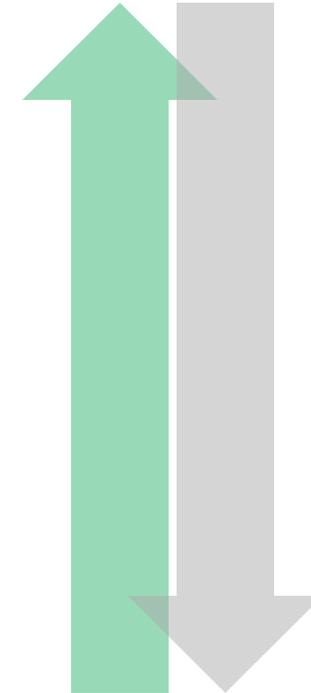
# Enterprise Architecture and Agile at Scale

Adaptability

Agility



Scale strategy down to Agile Delivery



Scale Agile Up and align delivery to Enterprise Vision

# Business Outcomes

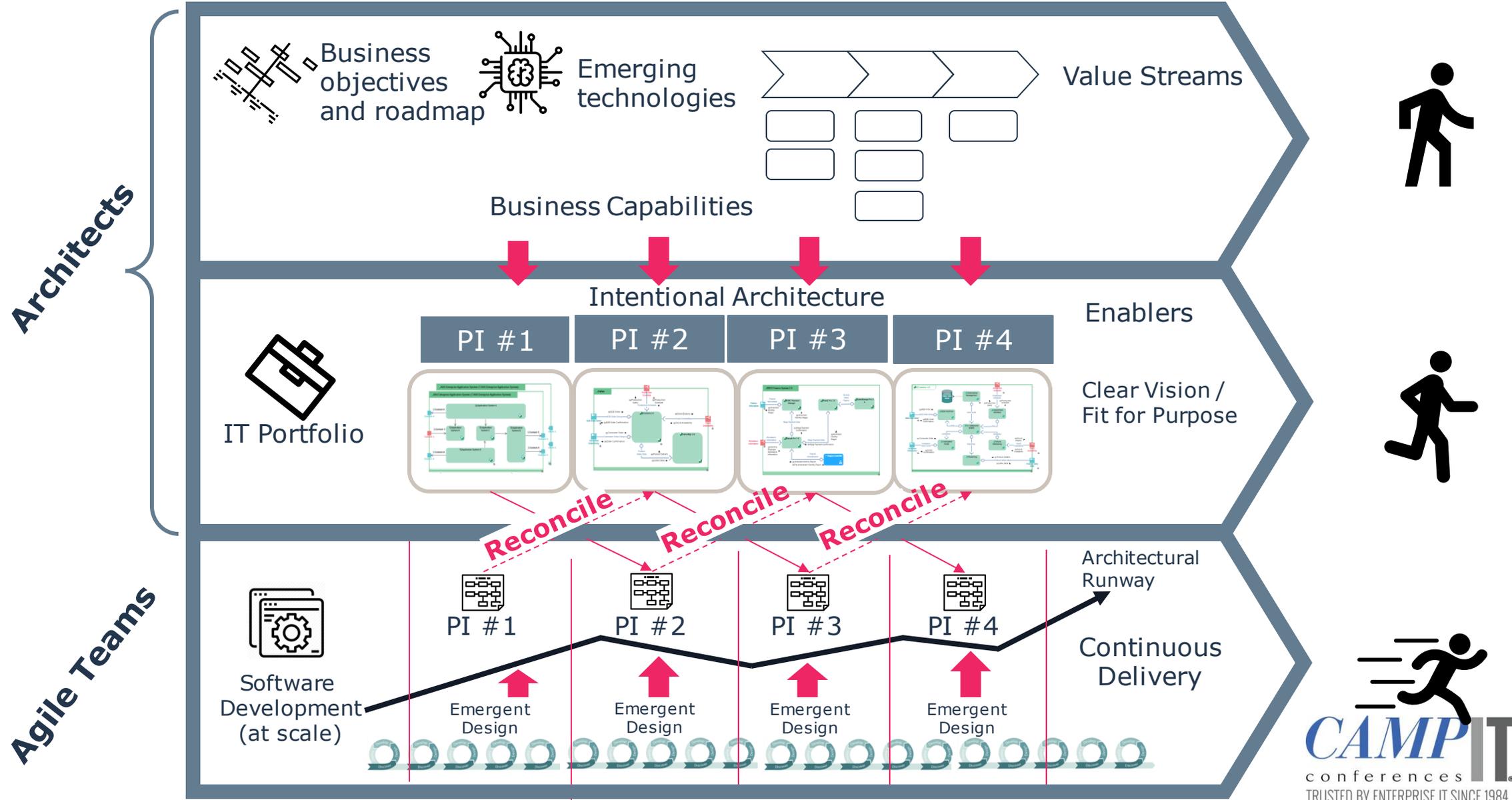
- Part of the value that the Architects can provide to the Agile teams, is clarity of the Business Outcomes expected through their work.
- There are cases where an Agile Team may only be working on one piece of a larger system, and in doing so, may not fully appreciate the impacts on the business if they pivot in one direction vs another.
- Using Business Capabilities, with clearly defined metrics (current and future state), is one way in which clear expectations can be communicated. This allows Agile Teams who may have limited visibility into the larger business or system context, to assess their pivots before they end up in the wrong direction.

A photograph of a tall, cylindrical stone tower, likely the Leaning Tower of Pisa, viewed from a low angle. The tower is made of light-colored stone blocks and has a small, arched window. The background is a clear blue sky. A green vertical bar is on the right side of the image.

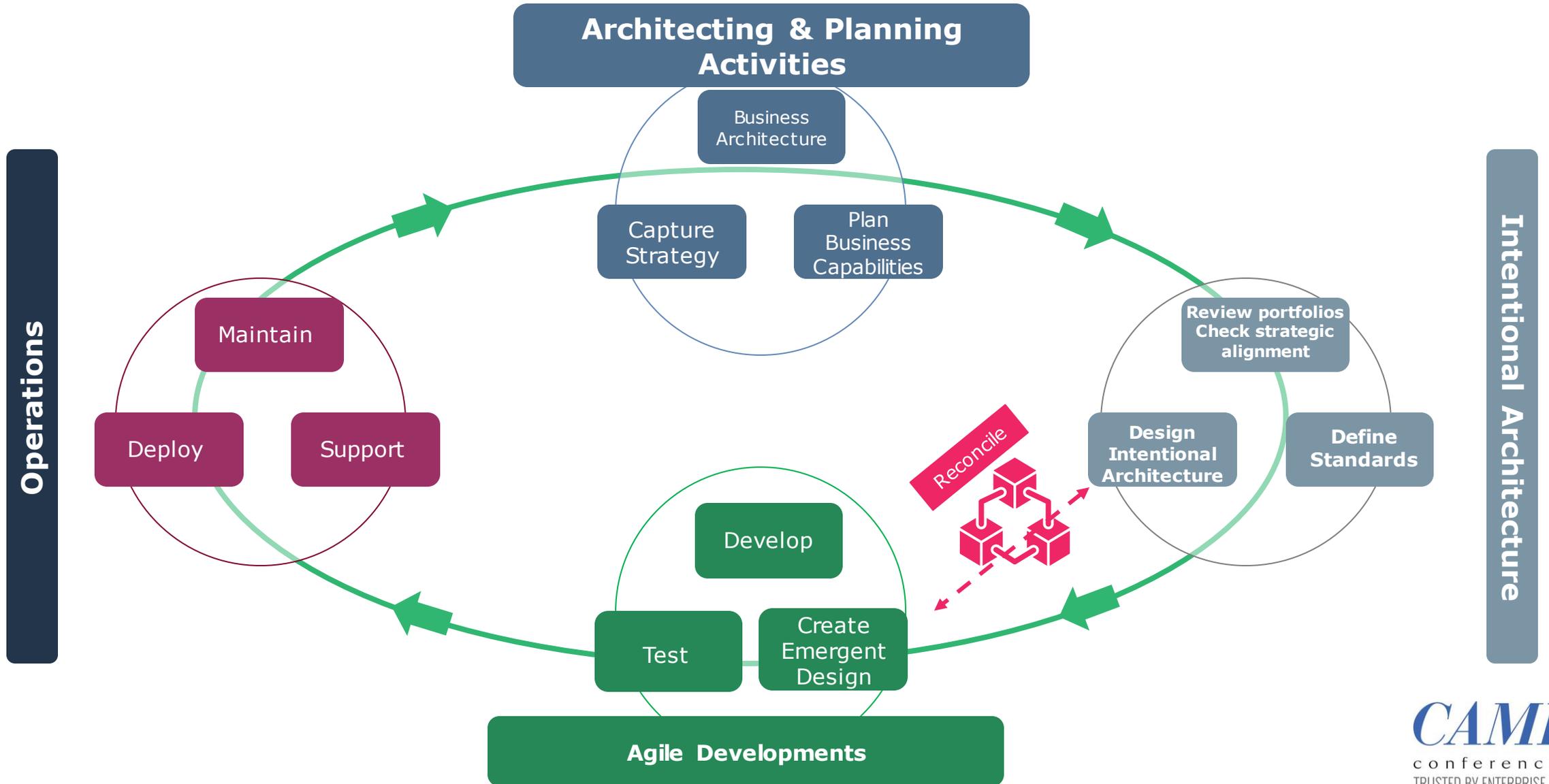
# How do we make this work?

- An Ivory Tower approach will NOT work.
- Hybrid EA Organization – Where Enterprise (and Solution) Architects work directly with the Agile teams to ensure not only collaboration, but outcomes and accountability.
- Planned Capability Evolution can define guardrails for these projects, to ensure they still in bounds while pivoting.

# Our Vision: An Architecture at Different Paces



# Enterprise Architecture in Agile Environments



# Conclusion

- Capture the Strategy in an easy to understand, easy to communicate manner
- Develop a stage-based plan for transformation
- Align the Capability model to that strategy, via Stages
  - This allows you to understand which Capabilities will be changed during which stages
- Establish metrics on your Capabilities
  - These can be past, present, ... and future (for planning purposes)
  - Future metrics can be used for focused ideation, including use of emerging technology
  - Present and Past metrics can be used to monitor, assess, or analyze performance
- Use the stages and the metrics to identify which IT projects need to be conducted (or established) in order to achieve the business outcomes.
- When it comes to agile, focus on enabling the agile teams, as opposed to standardizing or constraining them.



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