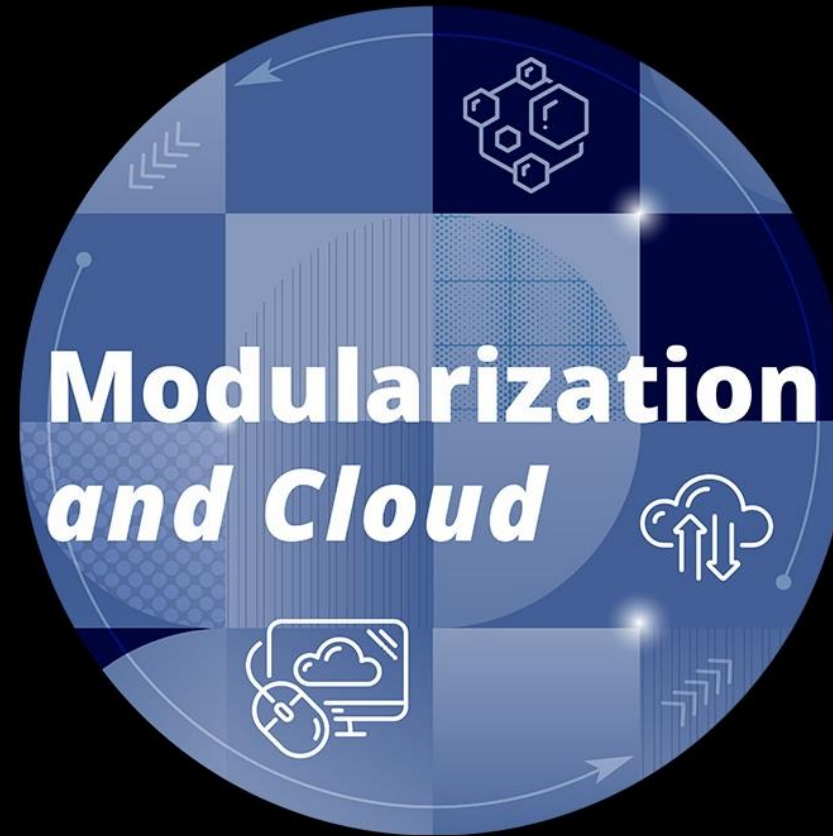


Deloitte.

*Designing an architecture to
reduce complexity, extend
automation and deliver innovative
digital products faster and better*



GRAB'N GO 11 OCTOBER

The foundation for agility and innovation

Speakers



Benjamin Vogensen
Senior Manager, Systems Engineering
Deloitte Denmark
Agile Advisor



Stefan Grinsted
Director, Deloitte Digital
Deloitte Denmark
Architecture Advisor

Increasing complexity can limit the ability to deliver value fast enough
Organizations often need to manage multiple complex and interdependent development activities that are hard to govern, which would require them to rethink their architectural design



Need

Meeting delivery criteria to **changing needs**

Continuously deliver **new functionalities**



Complexity

Managing complex **interdependent development activities**

Internal dependencies create **problems** and are **difficult to govern**



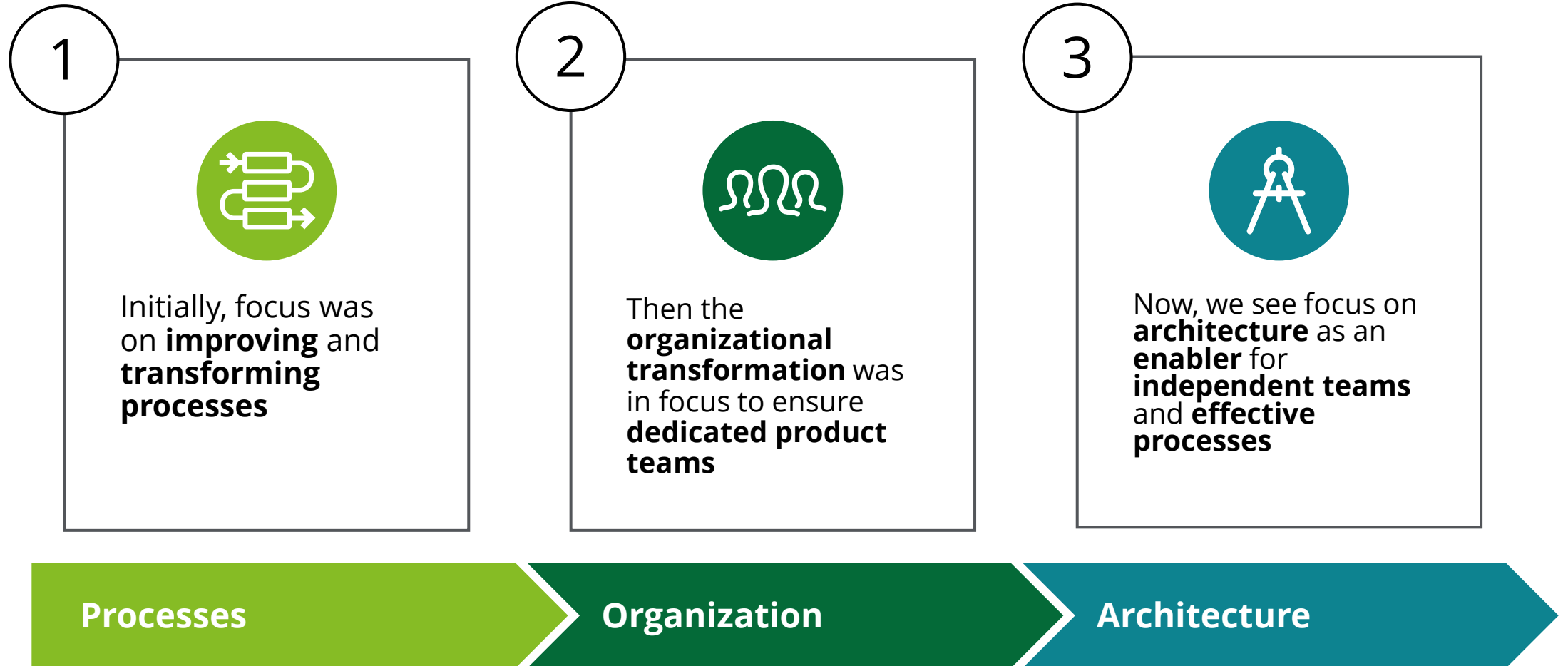
Solution

Needing to rethink **approach to deliver new functionalities**

Utilizing modularized cloud technology to deliver a composable architecture

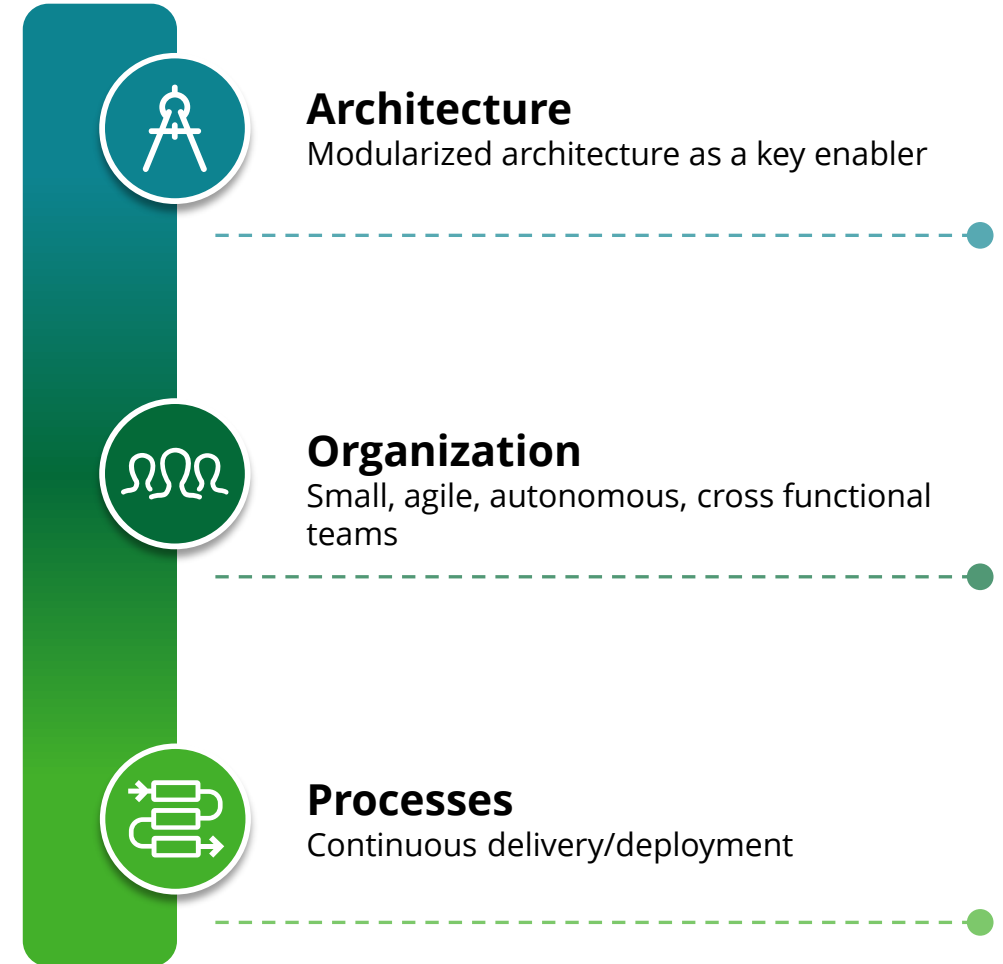
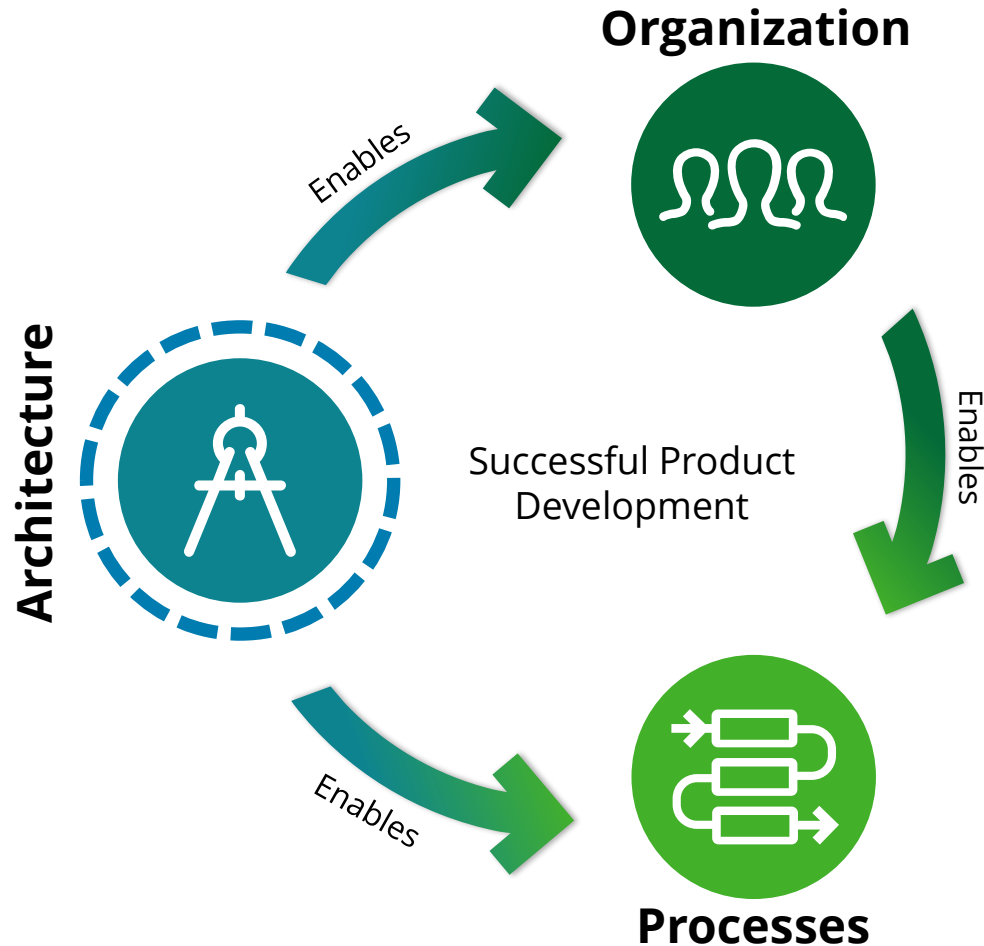
Becoming agile to deliver more innovation

How many organizations attempt their agile journey starting by transforming their processes



Starting point should be the architecture

Experience shows that by first focusing on building the architecture correctly will act as enablement for better organized product teams, more effective processes and support Project to Product transitions

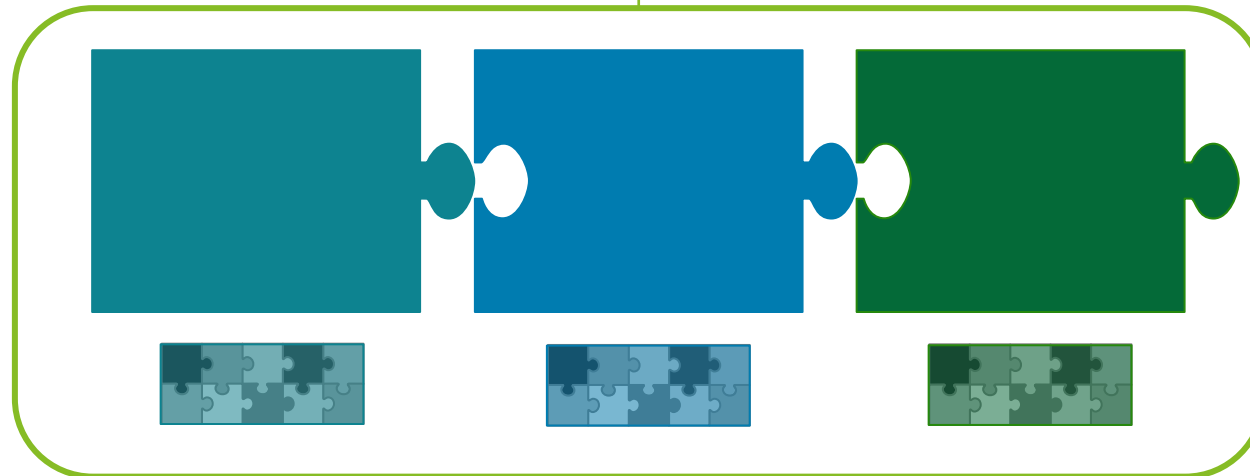


From a monolithic architecture to a modularized architecture

A modularized architecture can “open the door” for more innovation and ingenuity



A modular system is a collection of **building blocks** that can be **configured** in different ways, **adapting for different customer needs**

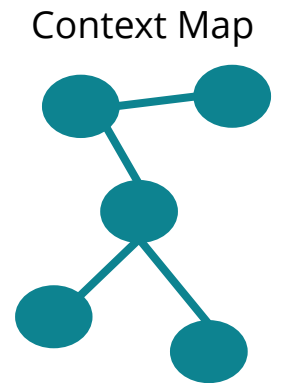
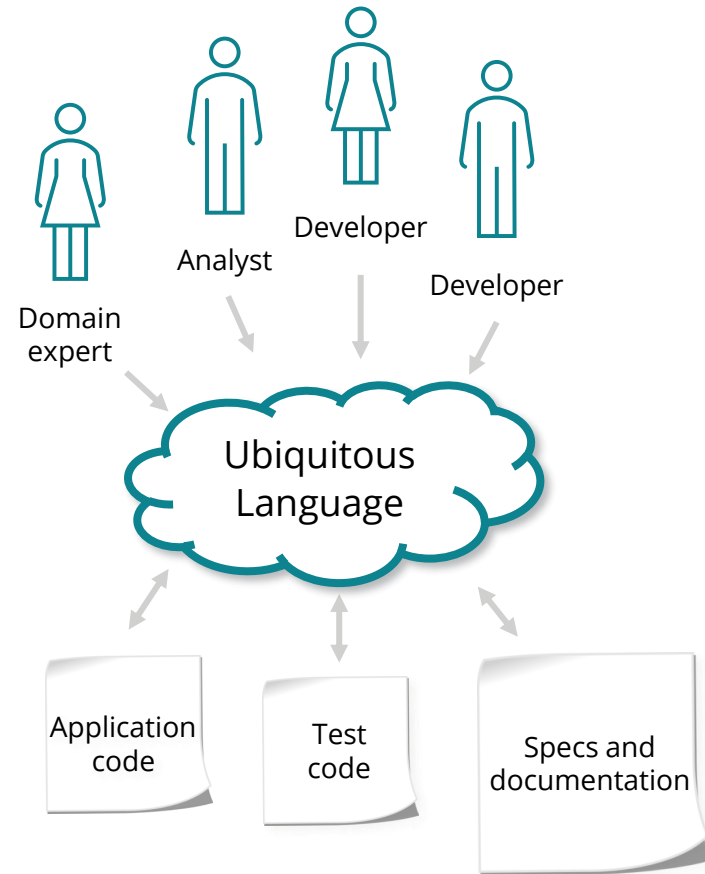


Standardized modules that each implement one or a few functional elements in their entirety can be put together to **continuously configure** and **evolve solutions** to customers

How Domain-Driven Design can help in this journey

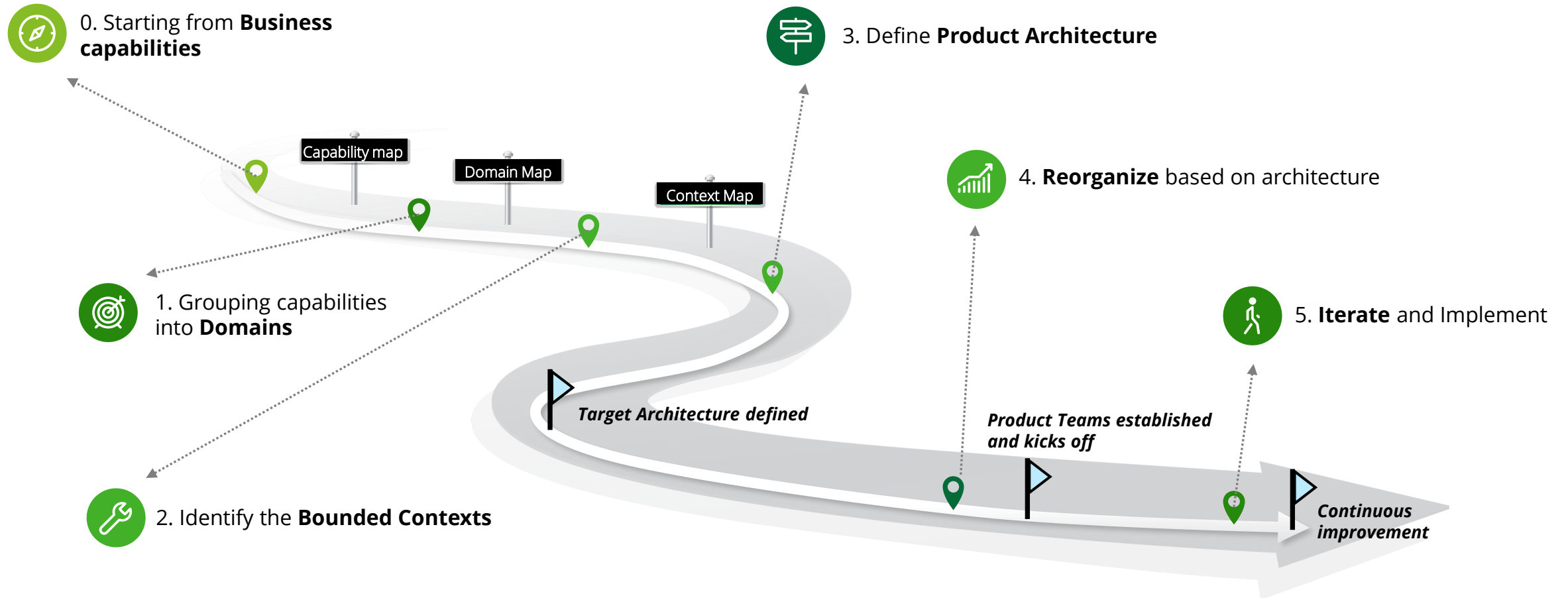
A good old approach made increasingly popular by emerging technologies

- Originally outlined by **Eric Evans** in the seminal book "*Domain-Driven Design: Tackling Complexity in the Heart of Software*"
- A way to **model complex software** architectures long before microservices
- Build **Ubiquitous Language** that embeds into the Software
- Strategic Design - organize large domains into a network of **Bounded Contexts**



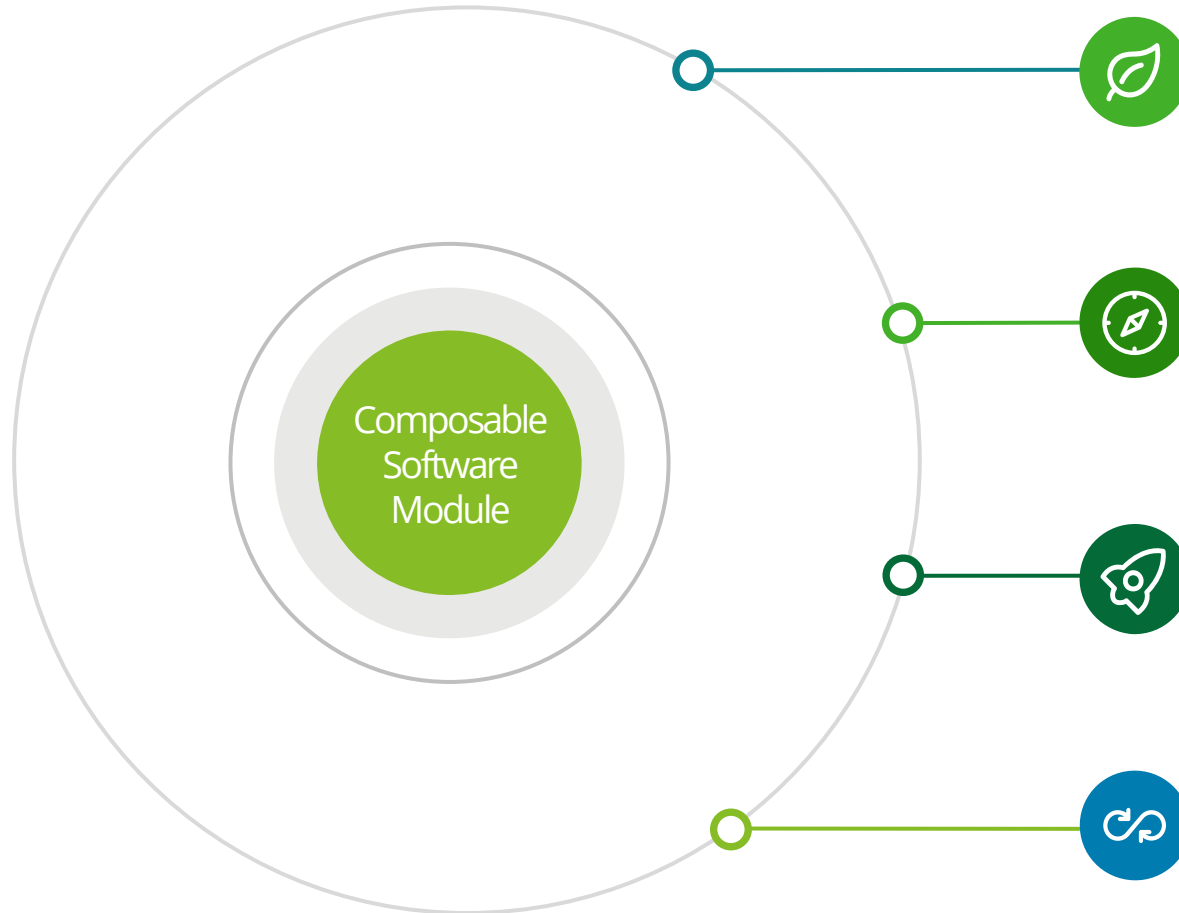
The journey to a modularized architecture

And get organized around domains and capabilities



Modularization is a prerequisite to composable

What being composable adds on top of a modular architecture



Autonomous

Changes in a module don't impact other modules.

Orchestration

Modules have an agreed way of interacting

Discovery

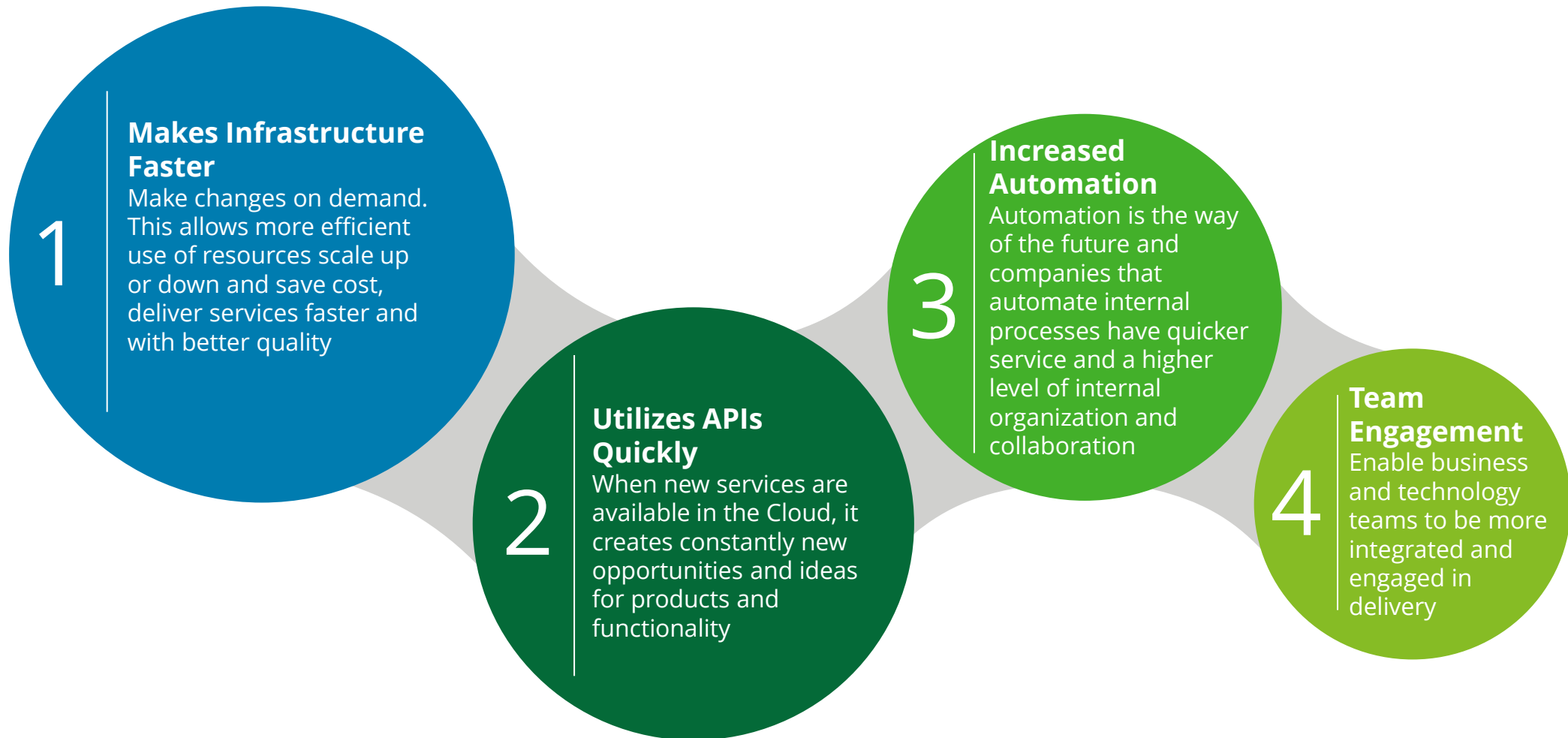
Other teams can easily find what they need

Business Agility

Fast-acting, empowered and independent teams

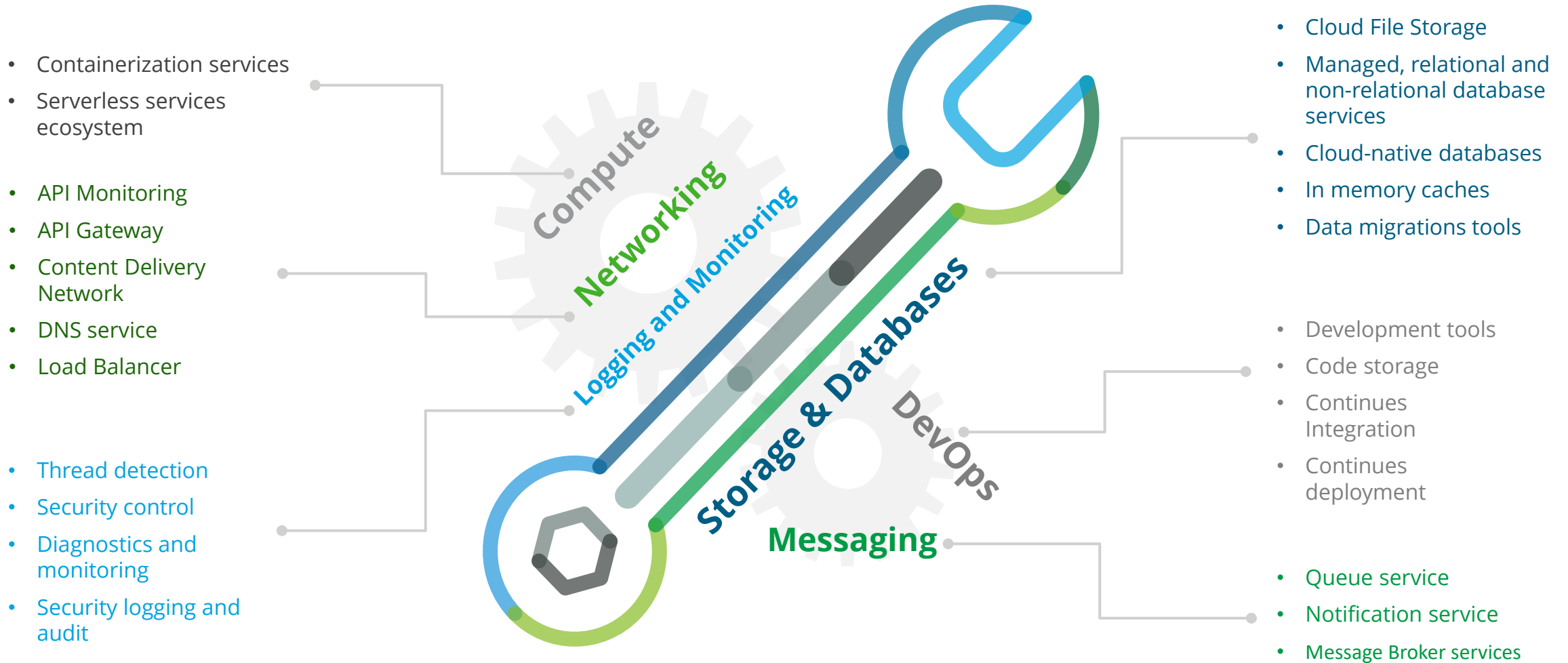
Cloud is an enabler for a modularized and composable architecture

Utilizing cloud benefits to enable innovation, automation and engagement



How Cloud can Support Modularization

The many different cloud capabilities that can help build and maintain a modular architecture





Case Study

How a consumer goods company increased its
business agility and delivered value faster

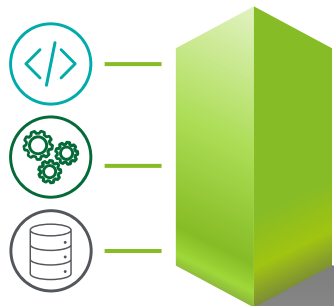
The Company's Problems and Goals

The combination of increasing demand for change and business agility, and the growing complexity of the company's IT systems and infrastructure, action was needed to realize more value faster

Problems

With their **monolithic architecture** and **siloed IT organization**, the company faced **challenges** in their further development:

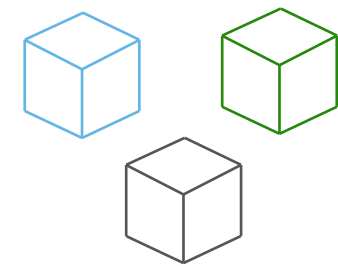
- ▶ Slow speed-to-market
- ▶ Increasing Complexity
- ▶ Tight Coupling and Vendor lock-in



Goals

Becoming more **agile as a business** in order to **respond faster** to market trends and customer needs through:





- ▶ A domain- and capability centric organization
- ▶ With independent and empowered product teams
- ▶ Using a shared language



Enabling Domain-Driven Design by Architecture

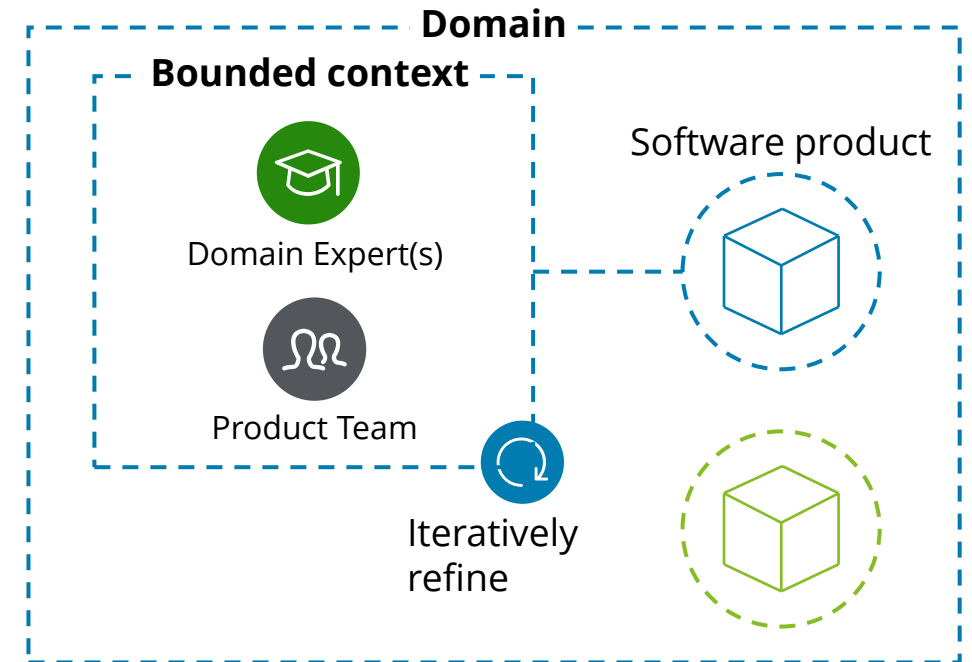
How the company's domain-driven design philosophy and modularization synergize to reach the goal

Domain-driven design (DDD)*

-  Build a **Ubiquitous Language** (*Shared Language*) and **embed it**
-  Organize domains into **Bounded Contexts** (Functional Areas)
-  Foster collaboration between **technical-** and **domain experts**
-  **Iteratively** refine the conceptual model that addresses domain problems

Modularization on product level

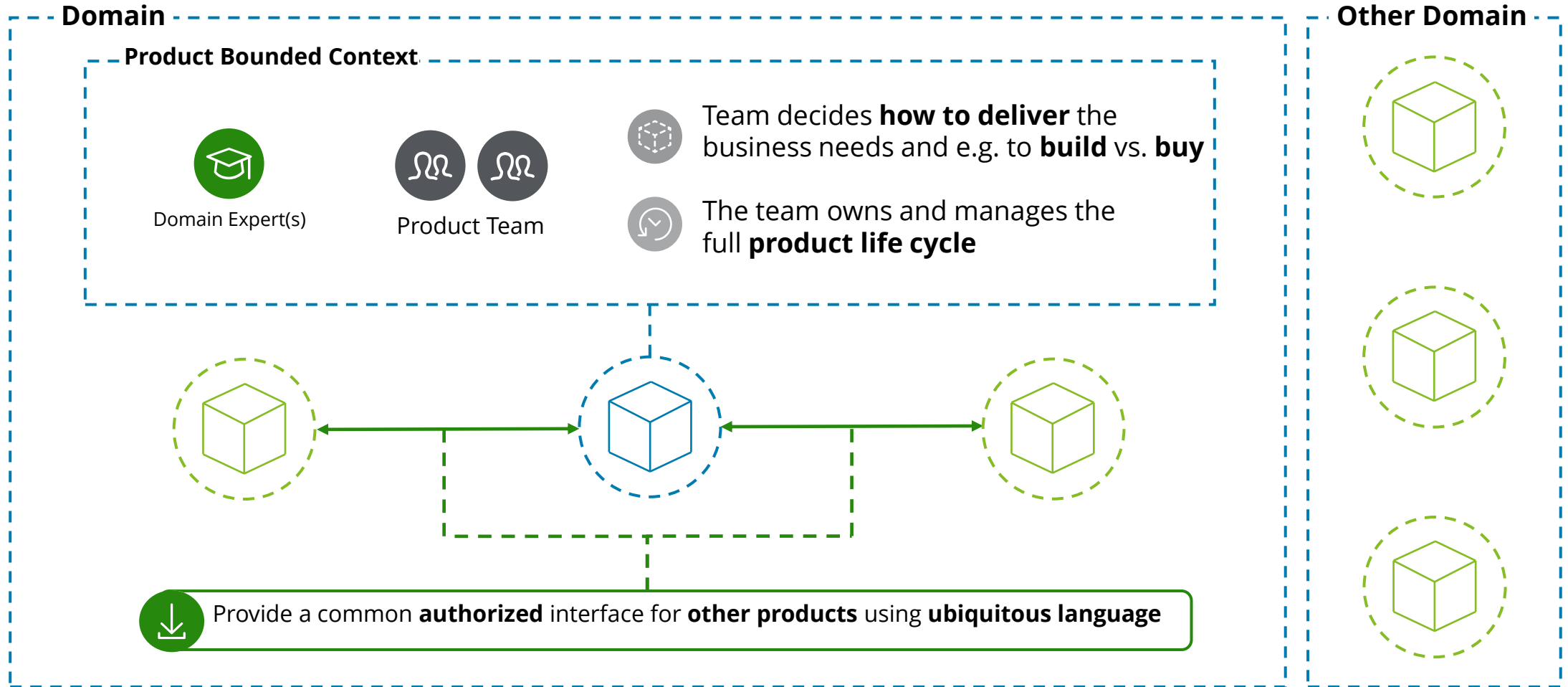
Organize by **domains** and their **bounded contexts** to **modularize** each unique product



* Domain-driven design was coined by Eric Evans in his 2003 book "Domain-Driven Design: Tackling Complexity in the Heart of Software"

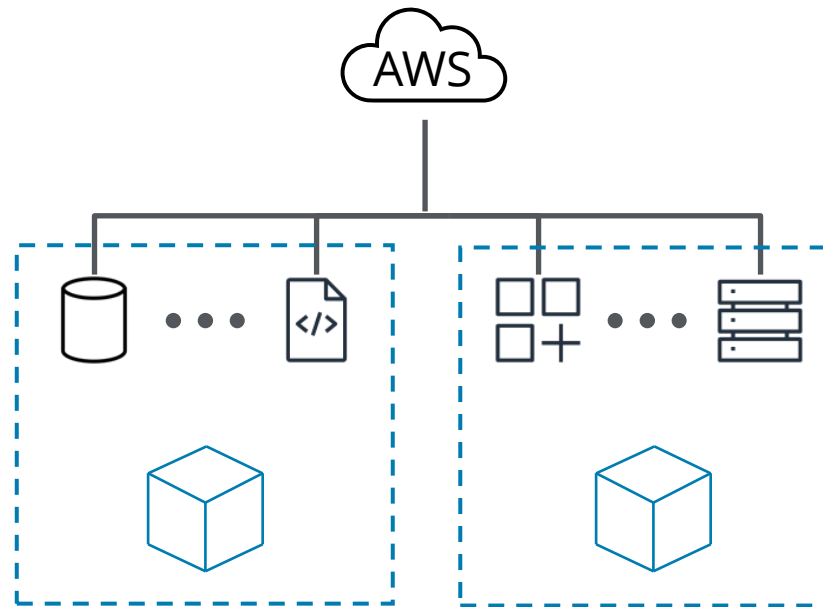
Empowering Product Teams to be independent

Agreeing on a Published Language (interfaces), enables each Product to be isolated and composable



Utilizing Cloud to enable business agility through faster value-delivery

The company uses Cloud technology to ensure an intelligent and modular architecture



Using cloud **microservices** to create products



Infrastructure is faster than ever to spin up and is easily managed



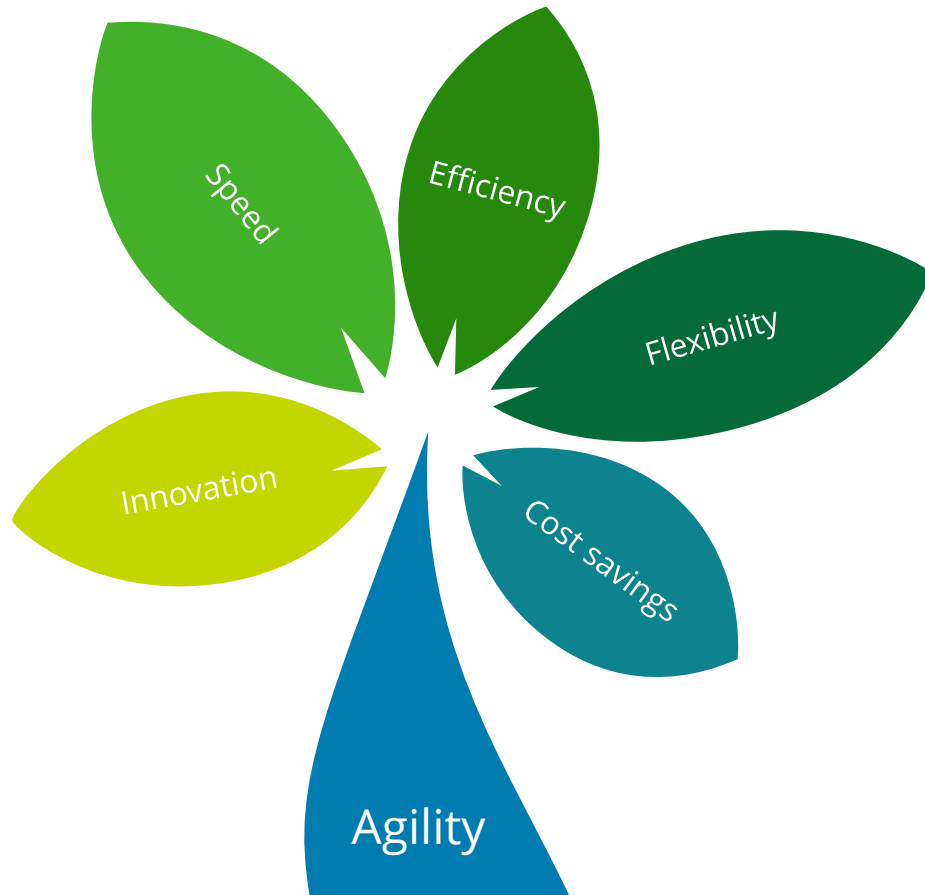
Teams spend time on solving the business problem, not IT problems



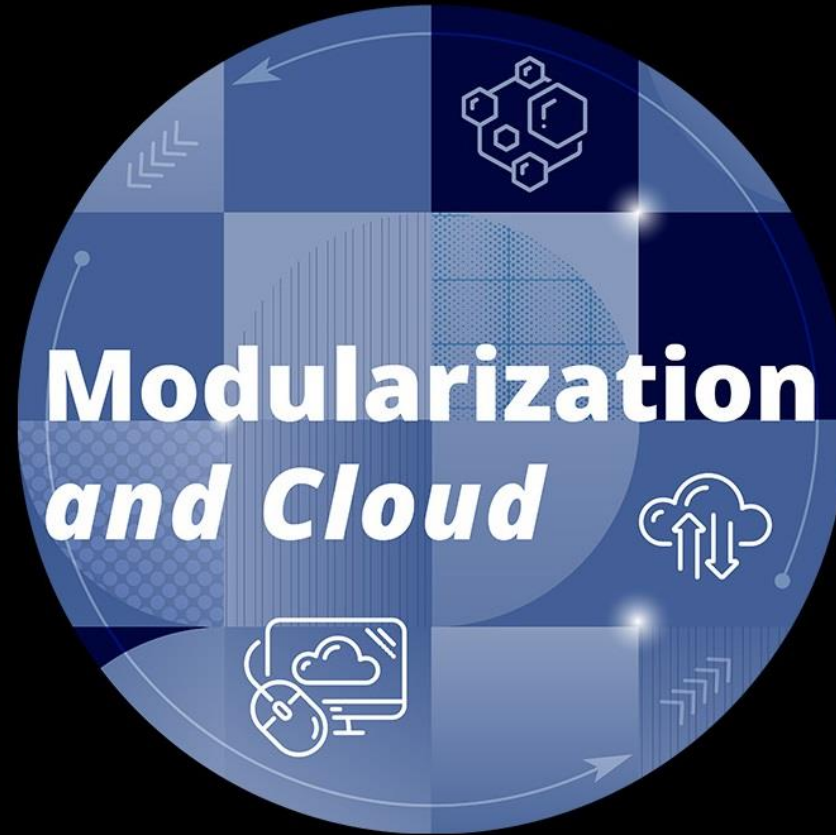
Teams synergize using similar technology stacks across products

The valuable benefits of a modularized and composable cloud architecture

Enables the required agility and innovation to constantly respond to emerging customer needs



- Agility**
Allows organizations to deliver new products, functions, and features more quickly and pivot more easily if needed
- Innovation**
Increased appetite for exploration, experimentation, risk-taking, and creative freedom enabled by quick hypothesis development and testing
- Speed**
Lower development and deployment time and thereby decrease in time-to-market for value-adding functionality
- Efficiency**
Easier to build and maintain as it adds ease to the process of identifying and resolving the root cause of performance issues
- Flexibility**
Enables potentially endless combinations by “mix and match” modules to achieve mass customization and continuously deliver value
- Cost savings**
When aiming to be highly agile and innovative a modularized and composable cloud architecture is a good business case as it will incur lower costs of frequent change



Transitioning from Project to Product for managing digital solutions, becoming more **innovative** and delivering **more value** is best enabled by a **modularized, composable and cloud-based architecture**