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PORTOROŽ

Unleashing Agile Transformation: A Scrum and Azure DevOps Approach

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Scrum.org
The Home of Scrum

Agenda

Intro to Agile Transformations

Preparation

Our Approach to Running the Transformation

Using Scrum to Implement Agility

Notable Practices

Case Studies

The background features a dark purple/black field with several overlapping, semi-transparent purple geometric shapes, including triangles and polygons, on the left side. On the right side, there is a large, solid brown circle. The text is centered horizontally and vertically in the middle of the image.

Intro to Agile Transformations

Agile Transformations Fail

Most Scrum implementations and agile transformations fail to realize their full potential!

"Only 30% of all teams or organizations that use Scrum will become excellent development organizations."

Ken Schwaber

<https://kenschwaber.wordpress.com/2011/04/07/scrum-fails/>

#ntk23

Agile Transformations Explained

Agile Transformations are risky and difficult because they include:

Instilling the Agile and Lean mindset

Moving from projects to products

Changing the culture

Confronting the „*This is the way we do things around here*“ attitude

Setting up stable, empowered, self-managing, cross-functional teams

Introducing new leadership management styles - Inverting traditional structures

Cleaning the remnants of past transformations

Scrum Helps Solving Complex Problems

How about getting help
from the Scrum Framework?

***Scrum Framework is optimized for
solving complex problems
where more is unknown than known.***

An organizational agile transformation is a complex problem, and Scrum can help solve it!

Scrum is a lightweight framework that helps people, teams, and organizations generate value through adaptive solutions for complex problems.

Culture Eats Strategy For Breakfast

"This is the way we work around here!"

Agile Transformations fail when they ignore
organizational culture

The organization needs to change
its **structures** and **control systems**

People need to change
attitudes, values, and assumptions
that underlie their behavior and how they work

Otherwise, change will not sustain!



Preparations

Preparations – Assessment and More...

Assess the Current State

Meet the teams (Go See) and the rest of the org – Interviews, Observing, Questionnaires etc.

Map the main Value Streams and measure metrics and their trends

Tools, Automation, Quality

Identify and explain the major issues

Create a Vision of the Future

Joint workshops

Propose approaches to address most major issues

Define and work out major improvement opportunities

Create initial optimization backlog

Win Over the Managers

Involve management early

Educate management (instill the agile and lean mindset)

Bring management on board

Jump-start the Product Groups

(and the whole Eng. Organization)

Organize for value delivery

Design organization to minimize dependencies

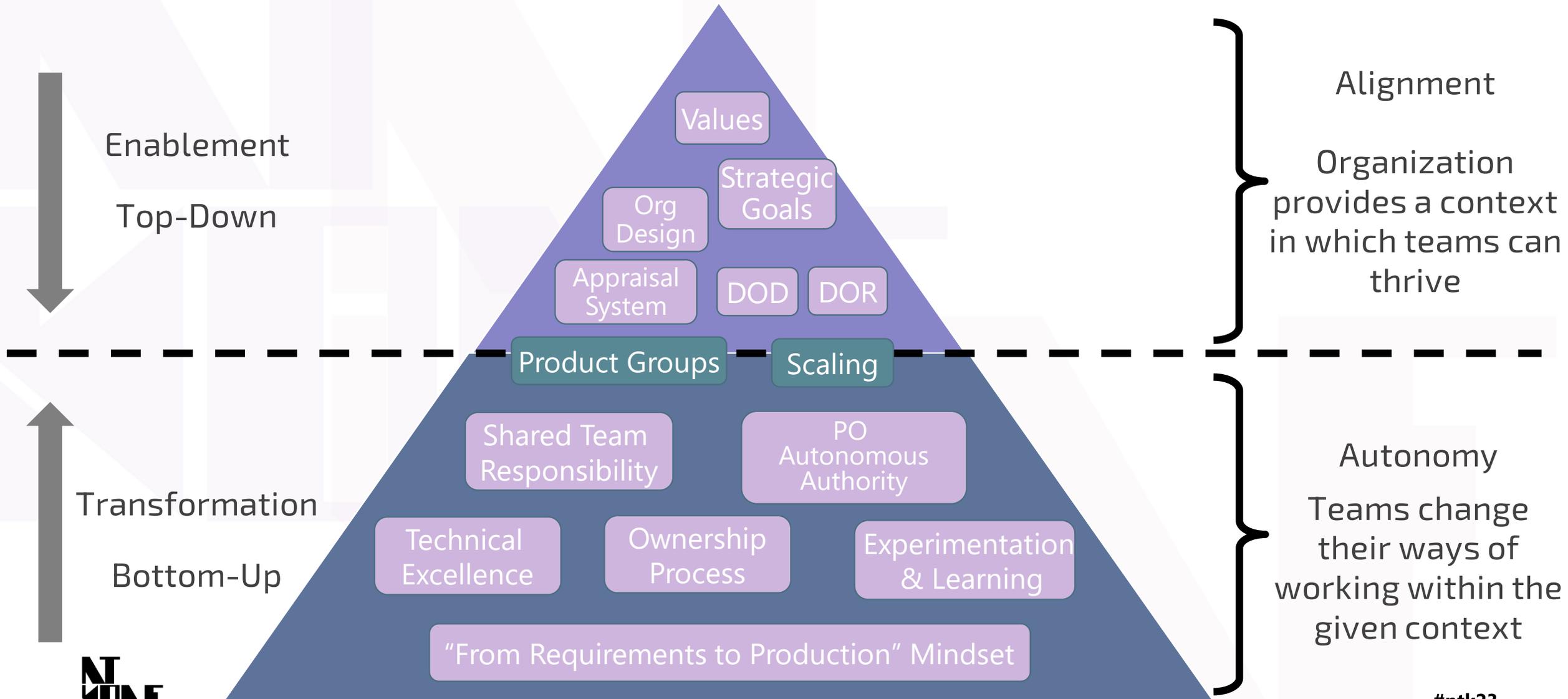
Review and renew team design

DOD, DOR, agile and engineering practices



Our Approach

Aligned Autonomy in the Agile Transformation



Basic Process - Use Scrum to Introduce Agility

Activities proceed on (at least) two levels

Use production process metrics to drive the transformation

Organization

Central Optimization Team (CTO)

Globally optimizing the entire organization

Scrum Team

Global Optimization Scrum

Work on systemic changes

Development Teams

Optimizing each team

Teams follow two Scrum processes

Production Scrum

Production work for customers

Optimization Scrum

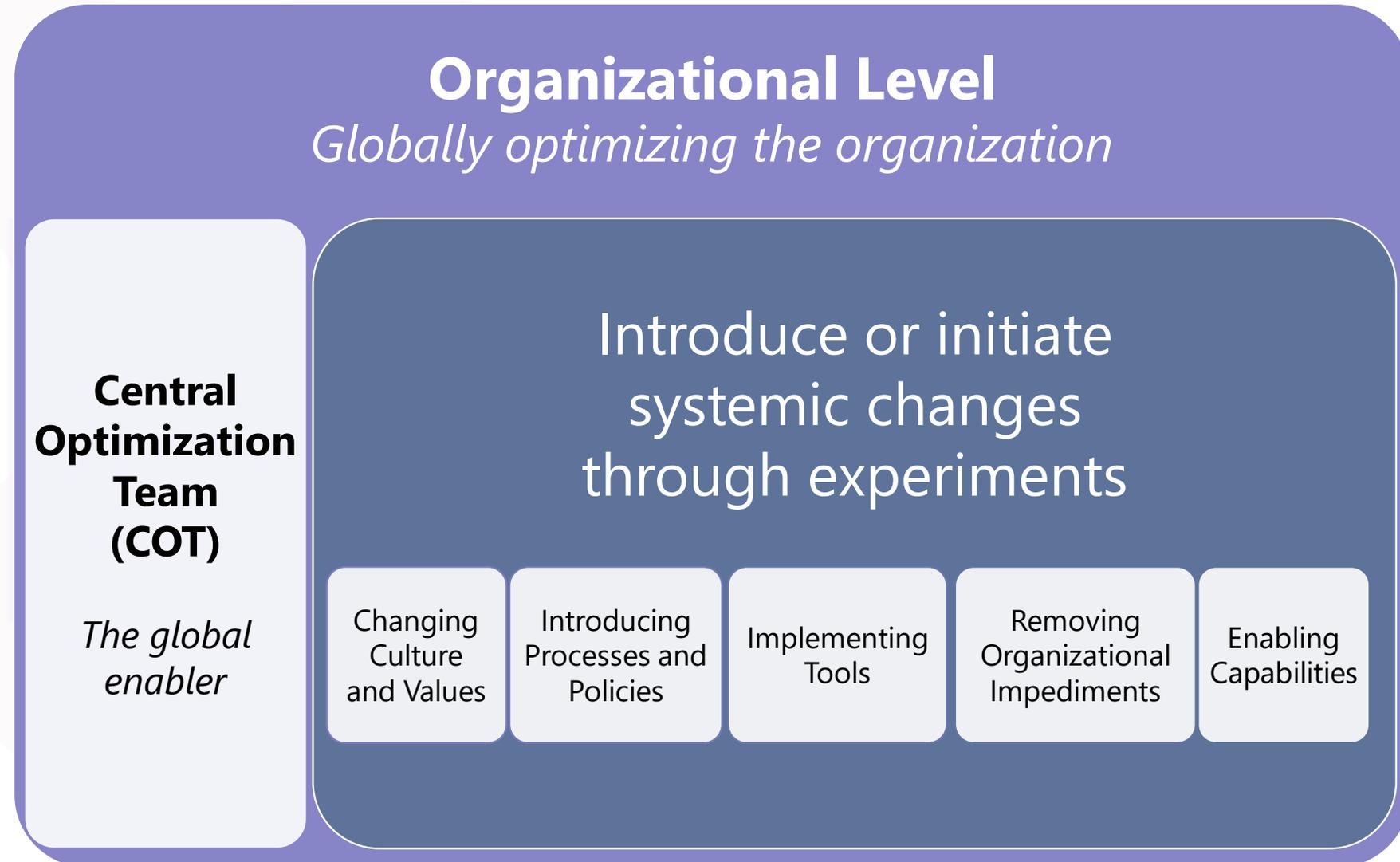
Work on the transformation

Central Optimization Team (COT)

A **Scrum Team** working in sprints to globally optimize the organization

Their product is the **transformed organization**

Proceed based on **feedback** and the effects of the change



COT Membership

Organizational Level

Globally optimizing the organization

Carefully selected individuals
covering different areas

Central Optimization Team (COT)

*The global
enabler*

Executive
Sponsor
(at least
one)

Representatives
from different
Organizational
Units

Middle
Management

Scrum
Masters

Internal
and
external
Agile
Coaches

Selected
Individual
Contributors
*Experienced in the
organizational
culture and processes*

COT Accountabilities

Organizational Level

Globally optimizing the organization

Central Optimization Team (COT)

The global enabler

Product Owner

Executive level COT member is an ideal candidate

Owens the transformation as a business initiative

Scrum Master

One of the company's SMs

Developers

All other COT members

External Coaches

Ensure proper goals, focus, and direction
Facilitate COT work
Support the PO
Support the wider organization

COT Global Optimization Product Backlog

EPICS

Work Item...	Title
Epic	>  Modeliranje Omega strategije fiksnih timova
Epic	>  Modeliranje Omega strategije varijabilnih timova
Epic	>  Modeliranje Omega strategije izdvojenih stručnjaka specijalista
Epic	 Modeliranje Omega strategije planiranja portfelja temeljem fiksnih timova
Epic	>  Modeliranje Omega strategije skaliranja timova za rad na velikim projektima
Epic	>  Konsolidacija postojećih organizacija i timskih projekata
Epic	>  Edukacija odabranog broja zaposlenika o Azure DevOps Boards alatima i praksama za organizaciju rada na razvojnim projektima
Epic	>  Optimizacija korištenja Azure DevOps Boards servisa za organizaciju rada na razvojnim projektima
Epic	>  Uvođenje Omega portfelja projekata
Epic	>  Edukacija svih zaposlenika uključenih u rad na razvojnim projektima o osnovama Scruma
Epic	>  Implementacija Scrum procesnog okvira u timovima
Epic	>  Osiguranje protoka (flow) posla kroz razvojni proces
Epic	>  Implementacija metrika protoka posla
Epic	>  Izgradnja zajedničke baze znanja (Knowledge Base)

COT Global Optimization Product Backlog

EPICS

FEATURES

Work Item...	Title
Epic	▼  Modeliranje Omega strategije fiksnih timova
Feature	 Definiranje potreba za fiksnim timovima
Feature	 Oblikovanje jednog ili više fiksnih timova i njihovo uvođenje u rad
Feature	 Definiranje Omega strategije za fiksne timove
Epic	▼  Modeliranje Omega strategije varijabilnih timova
Feature	 Definiranje potreba varijabilnim timovima
Feature	 Definiranje Omega strategije za varijabilne timove
Epic	▼  Modeliranje Omega strategije izdvojenih stručnjaka specijalista
Feature	 Definiranje potreba za stručnjacima
Feature	 Definiranje Omega strategije za raspoređivanje stručnjaka po projektima i timovima
Epic	 Modeliranje Omega strategije planiranja portfelja temeljem fiksnih timova
Epic	▼  Modeliranje Omega strategije skaliranja timova za rad na velikim projektima
Feature	 Best practice - više timova na više rješenja koja su integrirana

COT Global Optimization Product Backlog

Work Item...	Title
Epic	Modeliranje Omega strategije fiksnih timova
Feature	Definiranje potreba za fiksnim timovima
Feature	Oblikovanje jednog ili više fiksnih timova i njihovo uvođenje u rad
Product B...	[ePoslovanje] Formiranje tima
Feature	Definiranje Omega strategije za fiksne timove
Product B...	U vertikalni e-poslovanje napraviti analizu mogućnosti uvođenja fiksnih timova
Product B...	Eposlovanje fiksni timovi - izrada plana tranzicije u fiksne scrum timove
Epic	Modeliranje Omega strategije varijabilnih timova
Feature	Definiranje potreba varijabilnim timovima
Feature	Definiranje Omega strategije za varijabilne timove
Epic	Modeliranje Omega strategije izdvojenih stručnjaka specialista

EPICS

FEATURES

PRODUCT BACKLOG ITEMS

Optimize Each Development Team

Teams **own** the change at their team level

Teams **invest** a certain percentage of their capacity in the Optimization Scrum

Coaches and/or Scrum Masters **support** their change

Can be influenced by other teams' changes

Team Level
Optimizing each team

Two parallel processes

Production Scrum

Production work for customers

Optimization Scrum

Work on the transformation

e.g. 10% ~ 40 minutes daily on average

Ensures focus and optimization pace

Optimization Scrum - Implementation

Empirically drives team development from zero to fully functional Scrum Team

Introduces agile and complementary practices and tools

Optimization backlog as a separate Product Backlog

Initially based on the shared organizational backlog template

Enhanced based on the team's assessment results (for existing teams)

Ensures sustainable progress of both production and optimization work

Optimization Scrum with all accountabilities and events

PO - Internal or external coach, COT member

SM - Team's SM

Scrum Events

Most events start with the optimization part, followed by the production part

There is only one Sprint Retrospective

e.g. Daily Scrum: max 15 mins for Optimization followed by max. 15 min for Production

Team Level Optimization Product Backlog Template

FEATURES

 Team   

Backlog Analytics |  New Work Item  View as Board  Column Options ...

  Order Title

- | | | |
|---|---|--|
|  | 1 | >  Assessment of current team knowledge and education |
| | 2 | >  Azure DevOps setup for supporting Scrum |
| | 3 | >  Artifacts |
| | 4 | >  Definition of Done (DoD) Implementation |
| | 5 | >  Definition of Ready (DoR) Implementation |
| | 6 | >  Defining and introducing Scrum events |

Team Level Optimization Product Backlog Template

+ 1 Assessment of current team knowledge and education

- Scrum theory knowledge assessment
- Azure DevOps knowledge assessment
- Workshop on Scrum Fundamentals
- Workshop on Azure DevOps tools

The team's understanding of Scrum fundamentals has been assessed. The need for Scrum education has been determined.

The team's understanding of Azure DevOps tool basics has been assessed. The need for Azure DevOps tool basics education has been determined.

The team is educated about Scrum fundamentals.

The team is educated about basic Azure DevOps tool usage.

FEATURES

PRODUCT BACKLOG ITEMS

2 Azure DevOps setup for supporting Scrum

- Azure DevOps Team basic configuration (team, area, iterations, boards, backlogs, wiki, etc.)
- Basic education on implementing Scrum according to organizational standards

An Azure DevOps team exists and contains proper team members. Team Areas and Iterations are defined according to organizational standards.

The team has been educated on Scrum organizational standards. The team understands how to align with organizational standards.

3 Artifacts

- Creating the initial Product Backlog

The Product Backlog is populated with enough items to start working on the first Sprint.

4 Definition of Done (DoD) Implementation

- Workshop on DoD and its application
- Assessment of the existing DoD if any and other practices related to done criteria
- Modelling DoD
- Implementing DoD

The team is educated about using DoD in Scrum. The team understands how they need to change their current way of working.

The current practices for verifying done PBIs and the use of DoD have been documented. Compliance with the organizational standards has been achieved.

A team's DoD Wiki page has been created, describing only the specifics that differ from the organizational DoD.

The team is educated about working in accordance with DoD. The team has implemented DoD in their work.

5 Definition of Ready (DoR) Implementation

- Workshop on DoR and its application
- Assessment of the existing DoR if any and other practices related to refinement
- Modelling the team's DoR
- Implementing DoR through Kanban

The team is educated about using DoR in Scrum. The team understands how they need to change their current way of working.

The current refinement practices and the use of DoR have been documented. Compliance with the organizational standards has been achieved.

A team's DoR Wiki page has been created, describing only the specifics that differ from the organizational DoR.

The Refinement Kanban exists. The team is educated about using DoR and the Refinement Kanban. The team has adopted the Refinement Kanban.

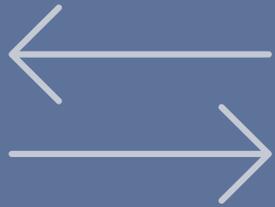
6 Defining and introducing Scrum events



Notable Practices

DevOps Highly Correlates with Agility

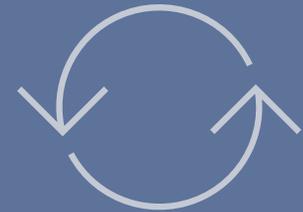
Drive the transformation to improve DevOps and achieve Agility



Prefer end-to-end optimizations across the entire value-stream business process (Systems Thinking)



Proceed based on feedback and the effects of the change



Create a culture of experimentation and learning

Involve the entire organization, not only development and IT
Engage sales, marketing, business, etc. in the transformation

Train Everyone!

Jumpstart the initiative with introductory training on Agile and Professional Scrum

Ideally, everyone attends, not just development and IT

Schedule training wisely

To benefit from the training, teams should start introducing changes immediately



Drive Transformation by Metrics

Team Level

Flow Metrics

Cycle Time (CT)

Throughput

Work In Progress (WIP)

Work Item Age

Product Group Level

"Accelerate" Metrics

Cycle Time (CT)

Deployment frequency (DF)

Change Fail Rate (CFR)

Mean Time To Recovery (MTTR)

Organization Level

Evidence-Based Management Metrics (EBM)

Current Value (CV)

Unrealized Value (UV)

Time to Market (T2M)

Ability to Innovate (A2I)

Make Use of Liberating Structures

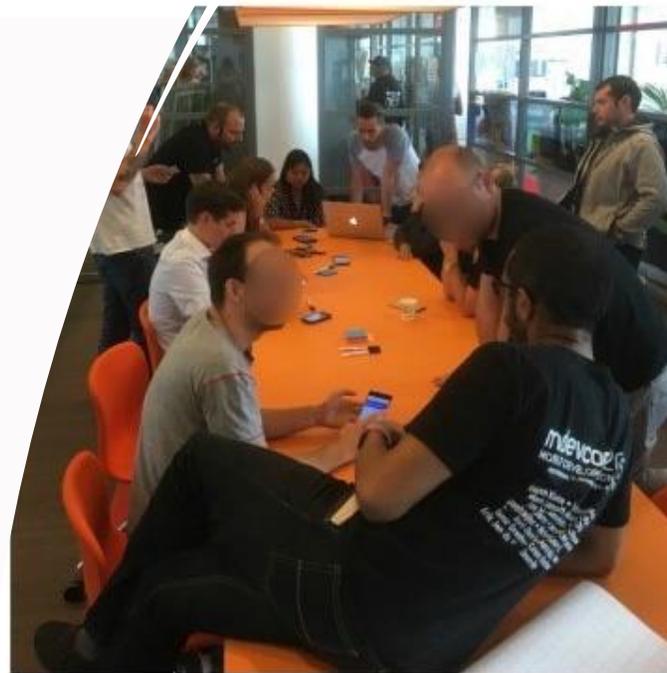
e.g.: Shift and Share for the Sprint Review

Easy-to-learn techniques to facilitate meetings and conversations in groups of any size

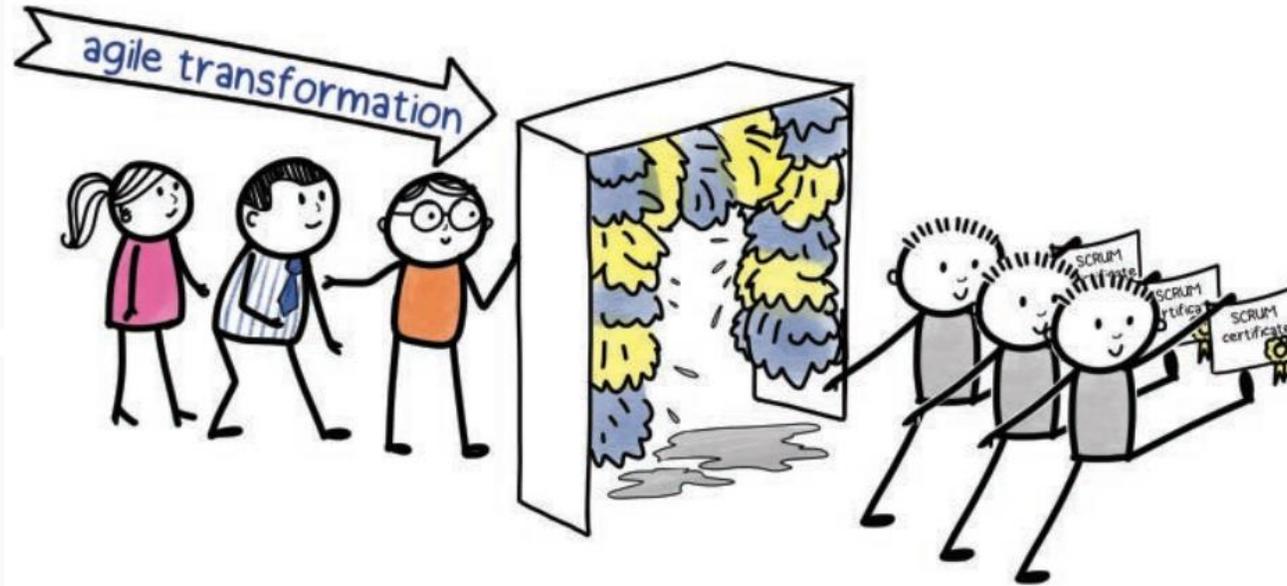
Effective for any interaction within the team

Useful for enhancing any Scrum event

Crucial when reaching out to stakeholders (for the feedback!)



Beware of Zombie Scrum



Teams doing the motions, but without a living heartbeat

They do not inspect and adapt based on feedback

They don't live the Scrum values

Main symptoms (according to survey.zombiescrum.org):

Teams do not know stakeholder needs

Teams do not ship often

Teams do not improve

Teams do not self-manage



Case Studies

Case Studies

Transformation
ongoing since
July 2020

Web and
E-commerce
Solutions

// **web**marketing

500+ Web Sites
250+ Clients

Cross-Functional
Team
10 Business Analysts,
Designers and
Developers

Transformation
ongoing since
September 2020

Leading Croatian IT
Company

 **omega**software

Custom apps, ERP,
Enterprise Solutions,
Smart City, ...

10 Cross-Functional
Teams
120+ Business
Consultants,
Developers

Similar Challenges

Inefficient Process

Gated waterfall process with customer approvals blocking the work

Frequent Task Switching

Difficulties balancing priorities for ongoing projects

Delays

Difficulties keeping up with the project schedule

Quality Issues

Bugs, unfinished features

Unclear Accountabilities

Micromanagement

Similarities

Early management involvement

The majority attended formal training

Needed systemic organizational AND team level optimizations

- Project teams replaced by stable (product) teams

- Clear accountabilities within teams (PO, SM, devs) and beyond (PMO, sales)

Supporting Business as usual is critical

Tool's standardization as an enabler (do it during the preparation)

Desire to globally optimize the end-to-end value stream



Differences



1 Team

No need for COT

External coach role

Embedded in the production team

Optimization process PO

Coaching everyone

End-to end scope within the 1st year

10 Teams

COT plays a critical role

External coaches' role

Embedded in COT

Consult the COT PO

Indirectly influence production teams through COT members or COT Increments

Phased approach, optimize sales in the 2nd year



Improvements

Scrum with clear accountabilities

Empowered single Product Owner(s)

End-to-end process supported by Azure DevOps

Transparent status insight

Improved requirements + DoD → Improved product

Minimized impact of support and incidents on ongoing development

Product Development Dashboard in Azure DevOps

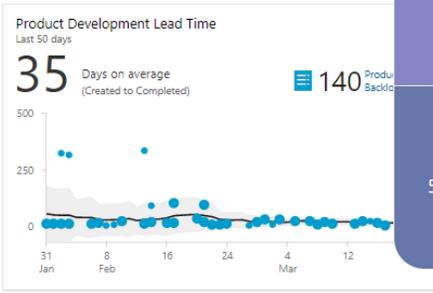
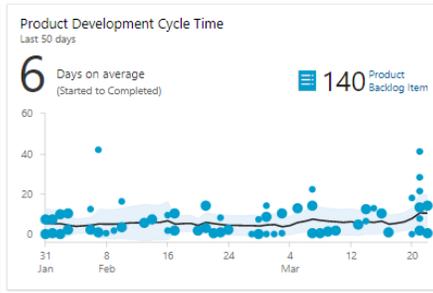
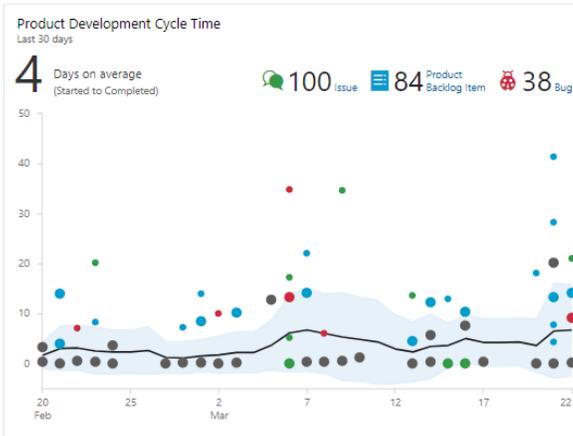
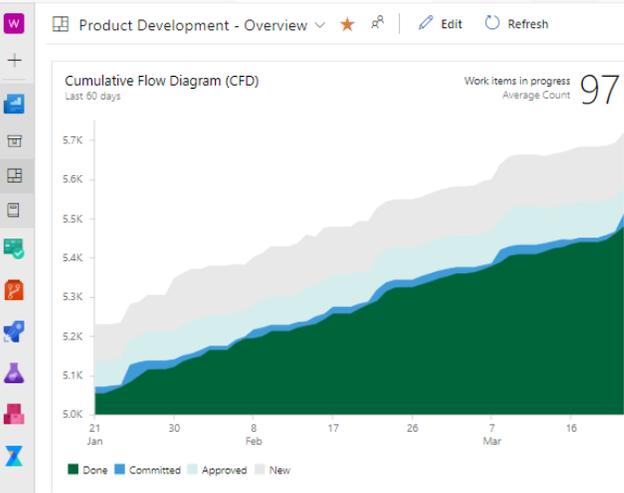
Transformation ongoing since July 2020

Web and E-commerce Solutions

//webmarketing

500+ Web Sites
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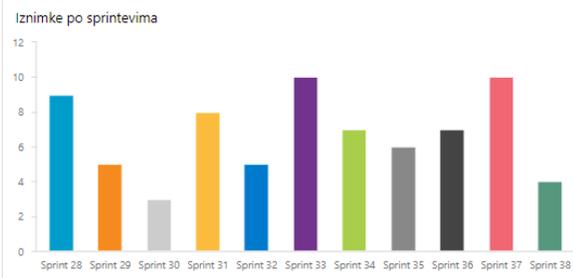
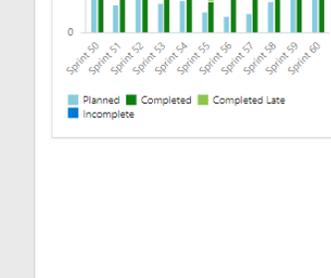
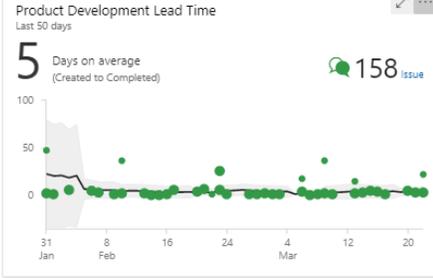
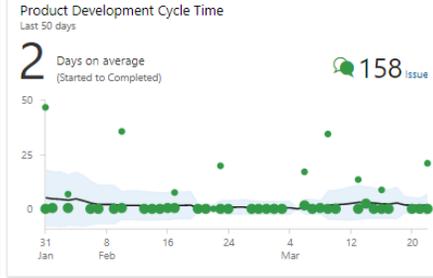
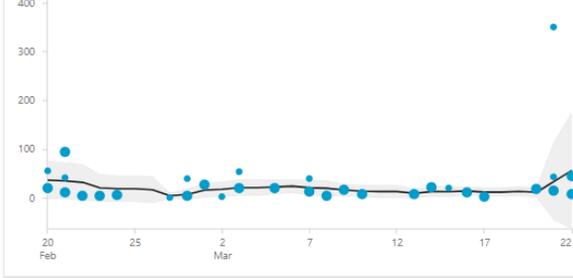
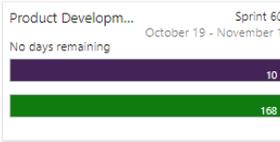
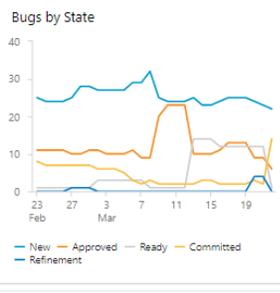
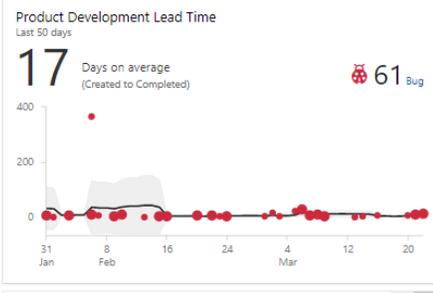
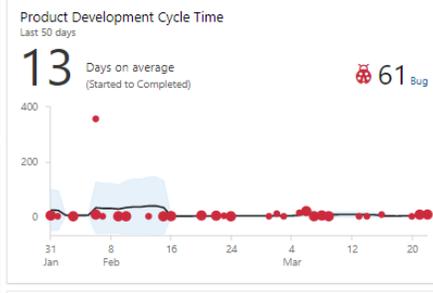
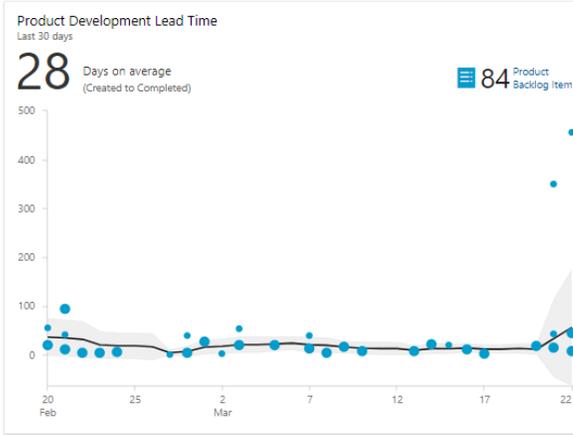


Dežurni dev team-a na dan 22.03.2023.

Ime i prezime	Period
	13.03.2023. - 17.03.2023.
	20.03.2023. - 24.03.2023.

Dežurni BA team-a na dan 22.03.2023.

Ime i prezime	Period
	13.03.2023. - 17.03.2023.
	20.03.2023. - 24.03.2023.



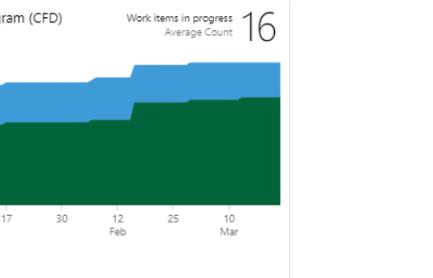
Closed DEV backlog items per sprint

Product Backlog...	Bug	Total	
Sprint 71	3	7	10
Sprint 70	35	12	47
Sprint 69	30	16	46
Sprint 68	30	13	43
Sprint 67	59	22	81
Sprint 66	52	19	71
Sprint 65	35	18	53
Sprint 64	34	19	53
(other)	106	32	138
Total	384	158	542

Cumulative Flow Diagram (CFD)

Last 90 days

Work items in progress Average Count **16**



Metrics: Example of Changes 2021-2022

Transformation ongoing since July 2020	Web and E-commerce Solutions
//webmarketing	
500+ Web Sites 250+ Clients	Cross-Functional Team 10 Business Analysts, Designers and Developers

Much improved Development process!

4x improved cycle time for Bugs
7x improved cycle time for Incidents (issues)
10% improved cycle time for PBI
2,3x fewer open Bugs

Need more Development team capacity!

2,5x longer lead time for PBIs

Metrics: Bug Cycle Time Improvements 2021-2023

Transformation ongoing since July 2020

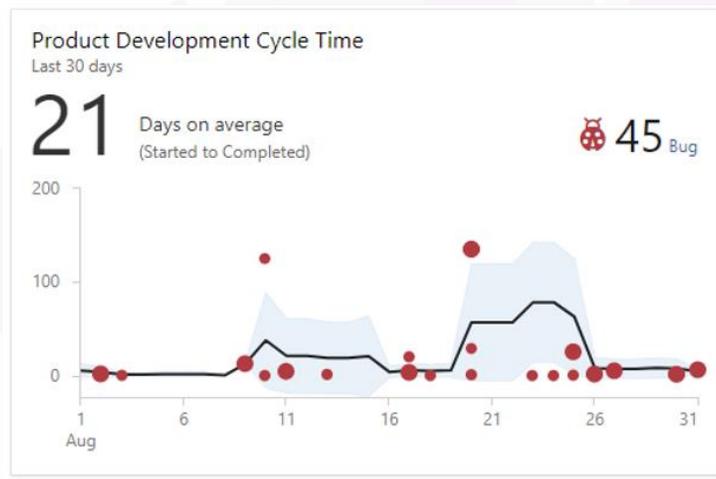
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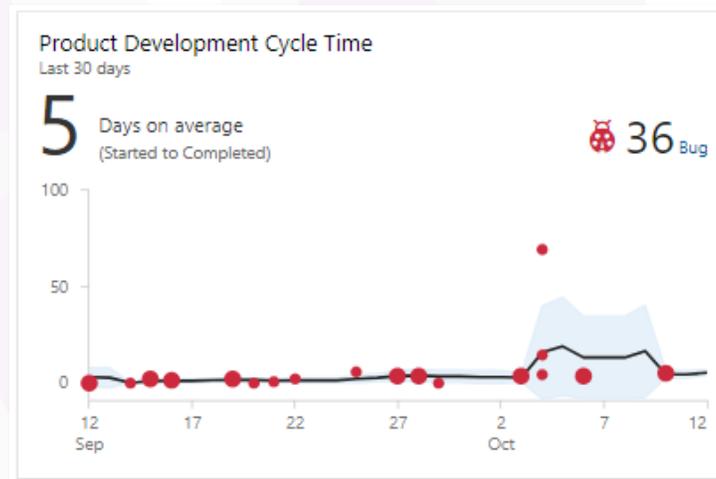
500+ Web Sites
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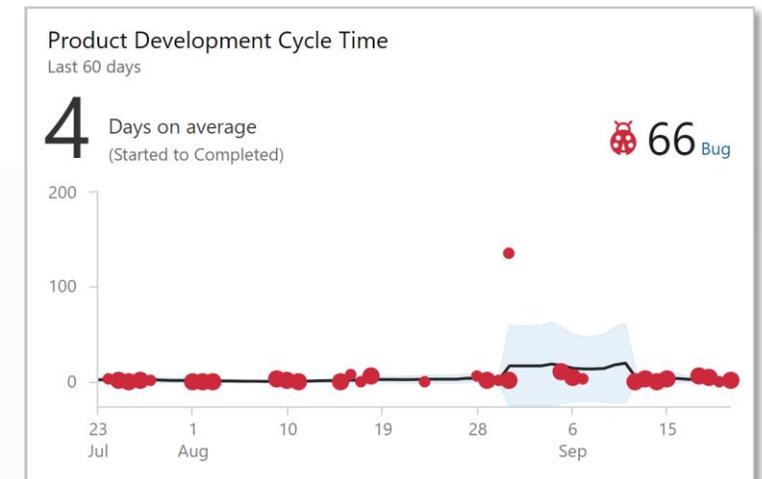
August 2021



October 2022



September 2023



Scrum.org: Case Study on Omega Software Agile Transformation



OMEGA SOFTWARE USES SCRUM TO IMPLEMENT SCRUM AND TO DRIVE ITS AGILE TRANSFORMATION INCREASING CLIENT SATISFACTION, TEAM COLLABORATION, MORALE AND MOTIVATION

September 2023

Scrum.org
CASE STUDY

omega software

THE COMPANY
Omega Software Ltd. prides themselves on their commitment to quality and customer satisfaction.

For more than 20 years, Omega Software Ltd. has been one of the leading providers of ICT solutions in Croatia, specializing in developing efficient business solutions for both the public and private sectors. Their mission is to help their clients digitize and modernize their business value streams through innovative, tailor-made software solutions, modern ERP systems, and futuristic Internet of Things (IoT) solutions that transform the way people interact with cities. They are at the forefront of modern digital trends developing ICT systems that have already improved business operations for more than 300,000 users. They pride themselves on their commitment to quality and customer satisfaction.

Most Omega Software products and services are designed for public procurement projects, which typically have a fixed scope, budget, and completion date. Core offerings include digital transformation systems such as Document and Case Management (DMS) and filing systems, enterprise resource planning (ERP) systems, and IoT solutions. They also provide custom development services to meet the unique needs of their clients. Omega Software DMS and ERP products are primarily tailored for the public sector, while their IoT solutions cater to both the public and private sectors. Centrix is a modern, comprehensive, and fully integrated office business management solution that is trusted by over 10,000 satisfied users to streamline their daily work. It combines a robust case and document management system that is fully aligned with the latest regulations for office operations and accompanying legislation. eVisitor is an innovative and comprehensive information system designed for tourist registration and de-registration, connecting all tourist boards across the Republic of Croatia.

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Omega Software

CASE STUDY | SCRUM

The Challenge

Omega Software previously used Waterfall-like processes to develop most products for public procurement projects. They had many challenges related to client satisfaction, team composition, requirement clarity, backlog management, production support issues, and a turbulent development process. In practice, they never complied with strict waterfall process rules. They tended to adjust requirements along the way and needed to approach the later project stages iteratively and apply some agile principles. In most cases, they assembled new teams for each new project, transferring team members from other project teams whose workloads were decreasing according to their plans. This way of working was unsustainable in the mid-and long-term. A simple slippage of one project caused a "butterfly effect" on the entire project portfolio, and constant replanning was necessary. Project teams were short-lived and had no clear guidance in processes, practices, and usage of tools. They were often just a group working on the same project with a narrow focus on delivery. The teams were not self-managed, and work was often assigned to specific people.

The lack of clear accountabilities for backlog management and refinement resulted in unclear requirements that weren't ready for development and caused frequent rework. Teams complained about unclear priorities and scope and had issues with estimating and planning.

They practiced the "big design upfront" approach and "late testing". Such an approach did not leave much room for updating the backlog based on stakeholder feedback. Teams were stressed by feedback instead of welcoming it to better satisfy clients' needs. This decreased process predictability and negatively affected the development process flow.

Another significant negative impact resulted from the need to support existing clients and their production environments. Teams that previously worked on these solutions did not exist anymore, and they were forced to reassemble them fully or partially on occasion. This negatively impacted the performance of existing teams whose team members were (temporarily) reassigned to their previous teams. As a result,

their plans and delivery schedules were seriously challenged. They allowed constant unplanned interruptions from different channels, like support and sales. This negatively influenced flow and created additional stress.

Regarding reporting and metrics, they manually reported on project progress and tracked only the working hours. As a result, they lacked a transparent insight into the project portfolio state. They did not have relevant, real-time data for making informed project and product portfolio management-related decisions.

Microsoft Azure DevOps was already their DevOps platform of choice, but its usage was not standardized across teams. Due to lacking knowledge and experience with this platform, departments, and teams used different patterns and practices. Teams were scattered across separate Azure DevOps organizations and team projects. Many useful platform features were completely ignored, like area paths, Backlog hierarchies, ordering of Backlog items, capacity planning, Kanban boards, team hierarchies, portfolio management, analytics and charts, dashboards, Wiki pages, and Test plans.

Beginning their Agile Transformation

Omega Software began an Agile transformation initiative in September 2020, building on the foundation of a few teams called "agile pioneer teams" that were already using some Agile approaches. Prior to this, they experimented with structured teams of 10+ people working on multiple projects and solutions for various clients. While their composition was relatively stable and they had some agile practices in place, such as daily meetings, the reality was that team members were divided into sub-teams focused on specific solutions and dedicated to individual projects. This made the overall team collaboration rather inefficient. Therefore, they decided to transition to project-based teams.

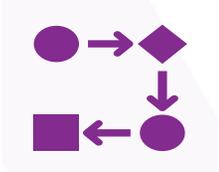
In line with the new approach, they would create a team for a specific project purpose and dissolve it upon project completion. In most cases, this group of people lacked time to mature and evolve into an efficient unit. A few long-term project teams were exceptions to this rule, with enough time to

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Closing

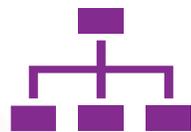
Call to Action



Don't delay your transformation any longer!



Consider an iterative and incremental approach



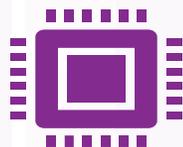
Parallel processes: Scrum to introduce Agility, Scrum for Production



Introduce agile values and principles, a lean mindset



Organizational structure and leadership as an enabler



Three Ways of DevOps, Metrics



Beware of Zombie Scrum



Experiment, measure/get feedback, continue or pivot



Let us know about your successes and challenges

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