PEDCO – Managed Process Services

Peter Pedross – CEO & Founder

Stages Insight 2018: THE ENGINEERING EXCELLENCE NETWORK

NEW Applied SAFe 4.5

PEDCO
Managed Process Services

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   - Program Leader: Customization and tailoring
   - Quality Manager & Compliance Officer: Ensure process compliance with A-Spice 3.0
   - Process Engineer: Extend and integrate
6. Learnings and Numbers
7. Discussion / Q&A-Session

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PEDCO – Managed Process Services

COMPANY PROFILE

We help your organization in the set-up, selection, operation and further development of lean and effective processes; in compliance with the defined product and process guidelines, efficiently and with transparent costs.

Managed Process Services

Applied SAFe®

Training

Peter Pedross

CEO AND FOUNDER OF PEDCO – MANAGED PROCESS SERVICES

He has over 30 years' experience in software engineering. He has a degree in Software Engineering and Management Psychology. He also studied Finance at the University of Zurich.

- Peter Pedross has been working in almost all possible IT-positions, including programmer, tester, process engineer, project manager, metrics engineer, software architect and head of development in an agile company. While working at a leading Swiss financial institute as the architect of the process framework, he was responsible world-wide for the entire set of lifecycles, processes, methods and tools used. This process framework was then used over years by hundreds of projects around the world, and continually improved.
- Several publications and given lectures in the fields of architecture, process management, agile, metrics and requirements engineering, both in the USA and in Japan, as well as in Europe. Excerpt last 2 years:
  - Speaker CMMI World Conference: 'Experience with CMMI @ Large Scale' (US)
  - Speaker OOP in Munich, Germany: 'SAFe 4.0 - Agile has grown up'
  - Speaker Swiss Day of Quality: 'Quality in agile environments'
  - Speaker CMMI Capability counts: 'Scaled Agility in Regulated Environments' (US)
- He is a Certified Consultant in "Scaled Agile Framework" and in "Disciplined Agile Delivery", and has a Diploma in Quality Management from EFQA.
- Encountered first experience with Agile since 1999 (eXtreme Programming, XP)
- Creator of the product Applied SAFe®
- Peter Pedross is also president of the board for computer science at the Swiss Association of Quality (SAQ); head of Process Management Group and member of the board of directors at SAQ.

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PEDCO Applied SAFe - Our Partners

KNOW-HOW AND PROCESSES FOR PEOPLE BUILDING THE MOST IMPORTANT SYSTEMS

COLLABORATION PARTNERS

SCALED AGILE	Applied SAFe® is closely developed and marketed together with PEDCO's collaboration partners Scaled Agile, Inc. and Method Park.	methodpark
SAFe® is the world's most comprehensive model for adopting Agile across an enterprise. It is the basis for, and fully supported by, Scaled Agile's integrated blend of products and services.	PEDCO Applied SAFe®	With "Stages", Method Park has developed a process management tool that facilitates definition, implementation and monitoring of development and business processes.

As stated on our web-page http://www.pedco.eu/partners/

TRANSFORMATION PARTNERS

PEDCO's global partners are companies believing in scaled agility and the power of Applied SAFe as an implementation of the Scaled Agile Framework® (SAFe®).

Applied SAFe – at a glance -

KNOW-HOW AND PROCESSES FOR PEOPLE BUILDING THE MOST IMPORTANT SYSTEMS

Agile is a new standard in the development paradigm and in the industry. The challenges of 'Agile at Scale' are realized every day. The only method out there for agility at scale is the Scaled Agile Framework. PEDCO has direct access to the thought leadership and all the content of SAFe, the Scaled Agile Framework, which is the de-facto standard for agility at scale. Combined with that we have direct access to Stages, the world leading process management tool and we as system integrators have integrated both the framework and the platform into one product called Applied SAFe.

Applied SAFe enables companies to implement SAFe fast and precise, customize it to their individual exact needs and to truly establish relentless improvement; if needed in compliance with several reference models like CMMI, Automotive Spice, MedTech and many more.

Applied SAFe works for those organizations who are in highly complex, highly compliant and auditable organizations such as Automotive, Defense, Aerospace, Medical and Finance. These organizations depend on their process and their process authoring and being able to stand up in terms of an audit or against an audit. PEDCO created the product Applied SAFe which creates a dynamic, where you can author your entire process and instantiate to your community internal or external and ensure that you have the best and most compliant process for your organization.

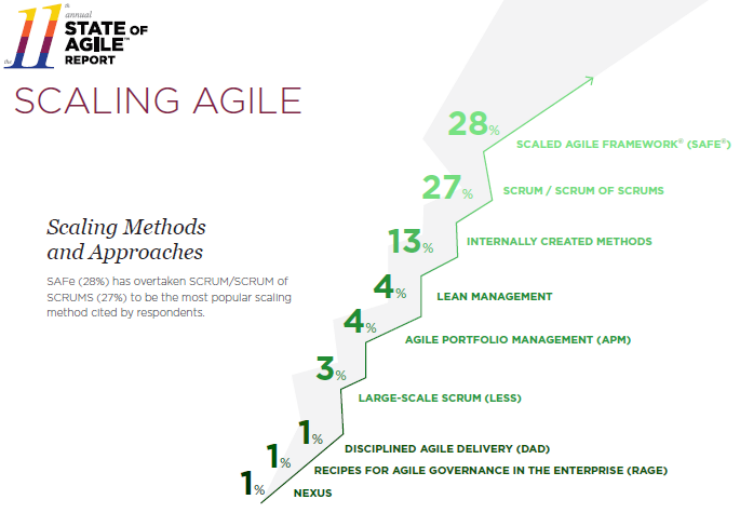
Context

WHY SCALED AGILITY IN REGULATED ENVIRONMENTS?

- **Increasing competitive pressure**
- **High innovation levels and high efficiency**
- **Low time-to-market**
- **Industry 4.0, Lean Start up, Agile**
- **Cyber-physical systems, increased complexity and dependency**
- **Just agile teams are to small to build complex systems**
- **Regulatory and organisational environment is becoming ever more demanding**
- **Most agile delivery teams face compliance requirements (regulatory and/or organizational).**
- **Strategy and governance steering is needed**

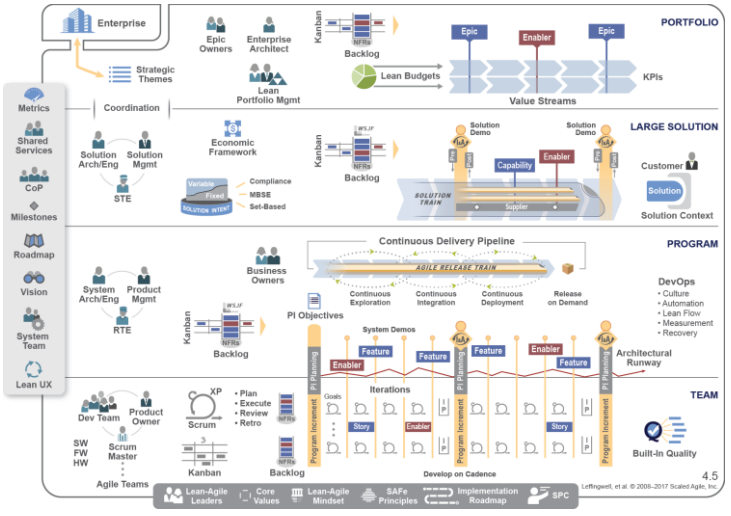
Trends in Scaled Agility (11th State of Agile Report by Version One; April 2017)

OVERVIEW IN USAGE OF THE MOST COMMON AGILE FRAMEWORKS

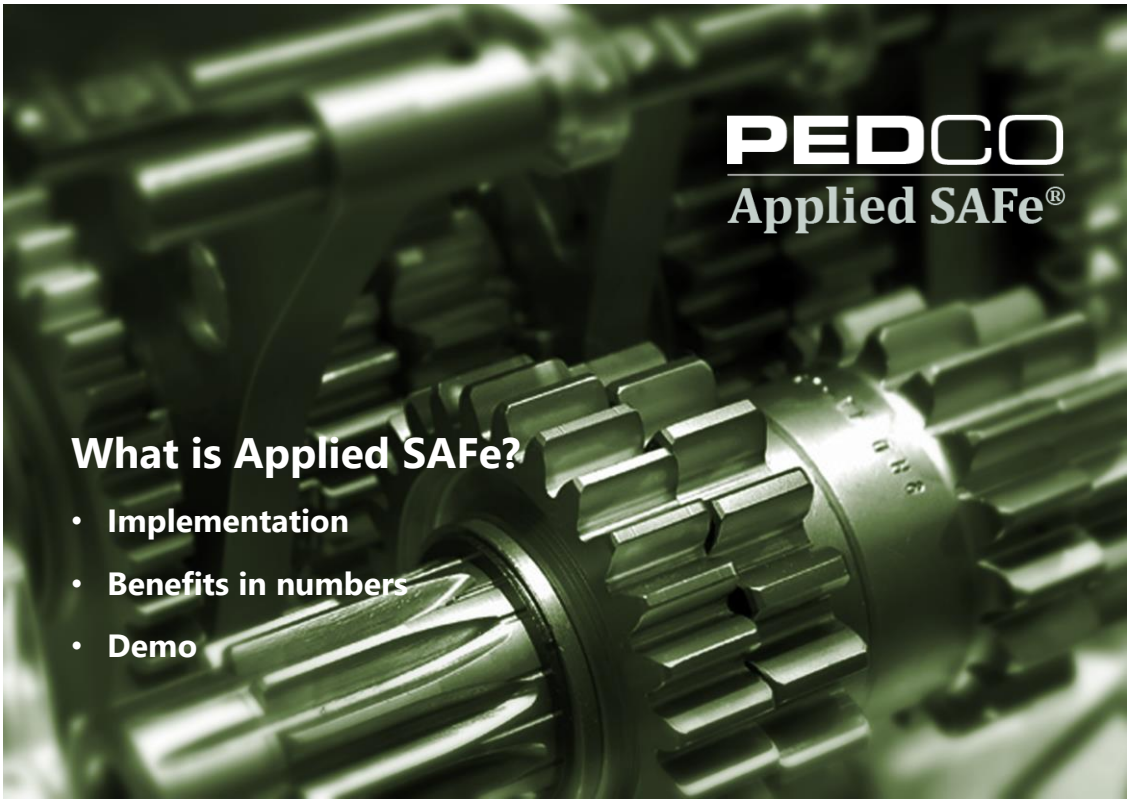


SAFe - #1 Framework for Scaled Agility

SCALING UP FROM TEAM TOWARDS PROGRAM, LARGE SOLUTION, PORTFOLIO AND ENTERPRISE

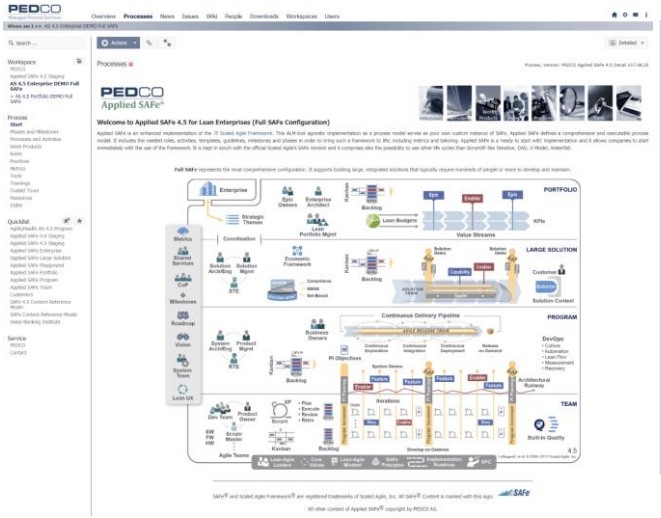


More Details on www.scaledagileframework.com



What is Applied SAFe?

YOUR OWN CUSTOMIZABLE IMPLEMENTATION OF SAFE AS A PROCESS MODEL



- Comprehensive Process Model (e.g. roles, activities, templates, guidelines, metrics, tailoring, milestones, phases)
- Built on SAFe® 4.5 as the 'de facto' Standard for Scaled Agility.
- Independent Instantiations on each Levels
- Customize with built-in Tailoring and run multiple concurrent Process Variations
- Extend, adapt and integrate with your own Process Assets
- Upward compatible, closely developed with and approved by SAI, elaborated in sync with future versions of SAFe®
- Includes licensed SAFe® Content
- Includes Compliance Mechanisms and Capabilities for Regulated Environments

Value Proposition

ADVANTAGES FOR YOU

Implement SAFe Fast & Precise

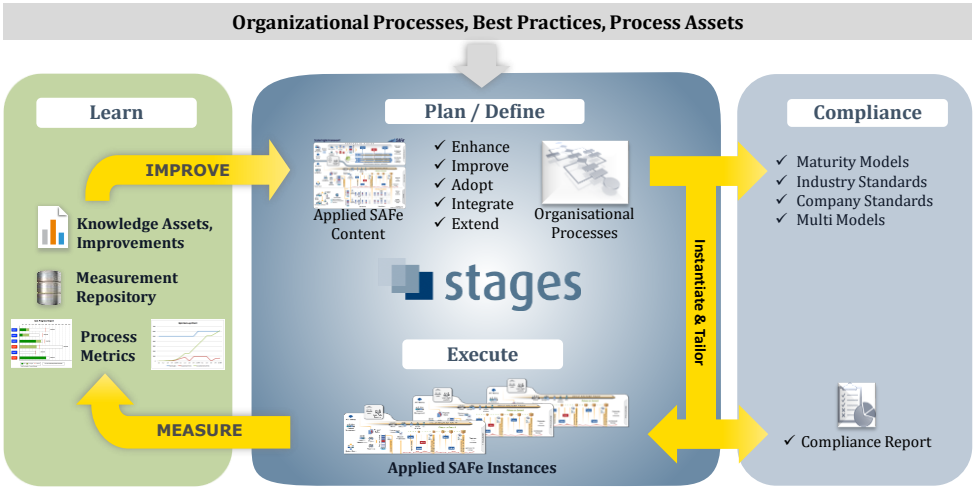
Customize and Extend

Develop Compliant

Learn, Innovate and Improve

Applied SAFe: Implementation

CONTEXT WITH UNDERLYING TOOL STAGES, THE WORLD LEADING TOOL FOR PROCESS MANAGEMENT



Have a Defined Process

DEMO OF APPLIED SAFE

- **Tom is new to the company**
- **He has several years experience in IT and has been working in an agile team.**
- **He loves to code and to test, but hasn't that much experience with Scaled Agility yet.**
- **Tom has been working in a small Scrum-team and has some basic knowledge about SAFe.**
- **Tom is interested to see, how Solution Development and DevOps is handled on a Large Solution Level at his new company.**

Implementation Details

ONLINE DEMO, SCREENSHOTS JUST FOR DOCUMENTATION PROPOSES

The following pages contain screenshots of the actual implementation of Applied SAFe as testimonials of what the product looks and feels like.

For a online-demo or a presentation please get in contact with us on www.pedco.eu or by AppliedSAFe@pedco.eu

Applied SAFe Distinguished Levels

APPLIED SAFE IMPLEMENTATION DETAILS

Every level of Applied SAFe has its own starting page:

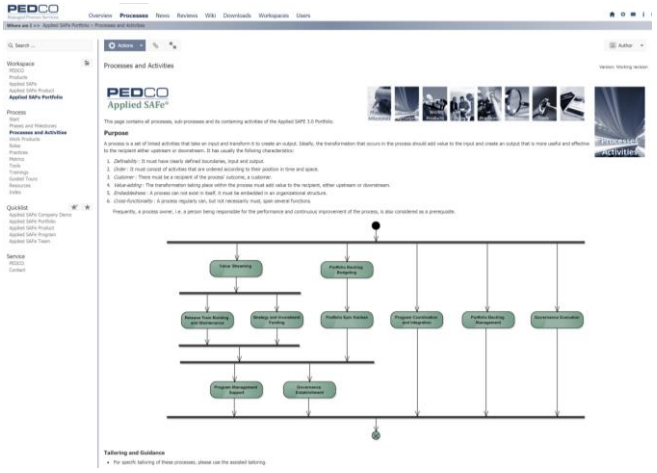
- Enterprise
- Portfolio
- **Large Solution**
- Program
- Team

The start pages share the same features:

- Each page contains the big picture of its level.
- Each icon and item on the picture is navigable.
- Explains in short the purpose of the specific level.

Processes

APPLIED SAFE IMPLEMENTATION DETAILS

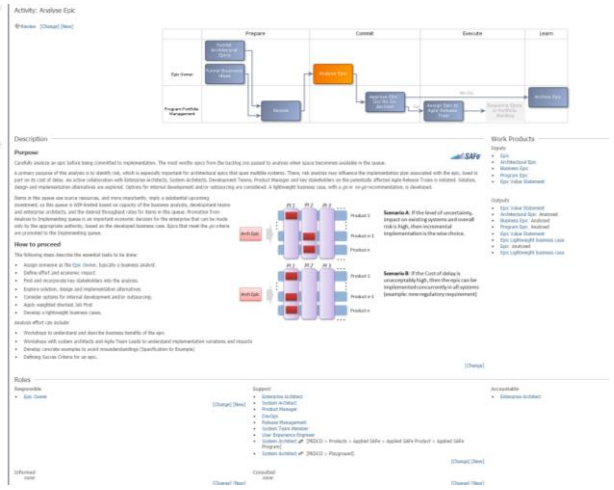


A process is a logical sequence of related activities to create a performance or a transformation of a work product. The elements therefore are phases, roles, documents and methods. They describe:

- what has to be done
- when (in which phases)
- by whom (which roles are involved)
- and how (in form of recommended practices)

Activities

APPLIED SAFE IMPLEMENTATION DETAILS



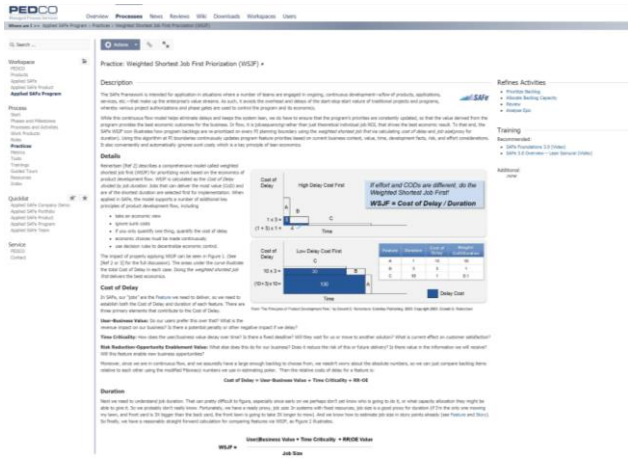
Activities are the main element for process users; these descriptions have to be understandable and must contain:

- Role according the RASCI
- Phase performed
- Predecessor and successor activities
- Input and output work products.

Activities do not contain any secondary information like 'How to ...'.; this belongs to a practice.

Practices

APPLIED SAFE IMPLEMENTATION DETAILS

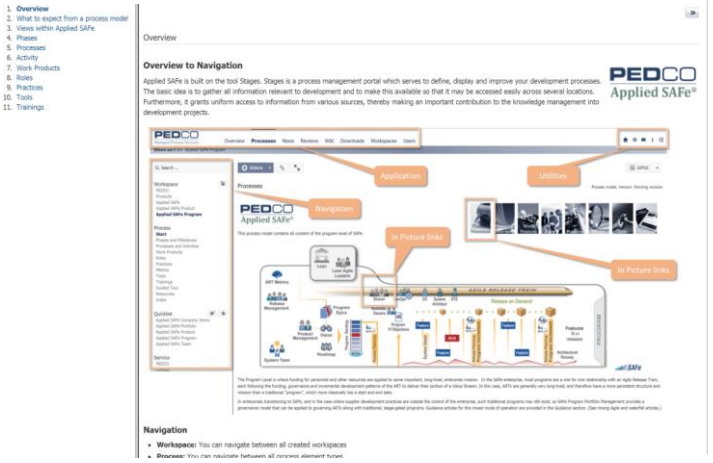


While activities tell you what to do, practices describe how something can be done.

- A practice is a profound description of how to do something.
- A practice is a method or technique that has consistently shown superior results
- Practice can evolve to become better as improvements are discovered.
- Practices indicates training

Guided Tours

APPLIED SAFE IMPLEMENTATION DETAILS



Specifically built-in guided tours help you to get started. Different guided tours explain how to navigate, the structure and how to use the product.

- How you get started with Applied SAFe.
- How to instantiate the model for your company, portfolios, programs and team-levels.
- How you can tailor, adopt and enhance the model.
- How to use the different license levels of Applied SAFe.

Phases & Milestones

PHASES AND MILESTONES ALIGN PROCESSES, ACTIVITIES, WORK PRODUCTS, … WITH THE TIMELINE

The phases of all Applied SAFe Levels Enterprise, Portfolio, Value Stream, Program and Team are all designed the same way.

- Each level is divided into three repeating phases **Plan, Execute & Learn** and they represent a shortened Deming-Circle.
- Milestones are designed to be agile milestones.
- Phases are varying in their length; for illustration phases are shown with equivalent lengths.
- Circle starts at the top, like a clock at 12 AM and moves forwards in a clockwise direction.

Phases

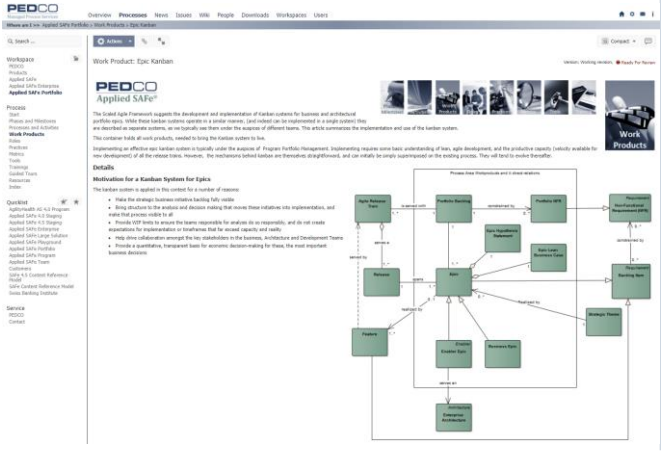
APPLIED SAFE IMPLEMENTATION DETAILS

Phases divide the process into time sequences. Phases and milestones are time or event-related element types, typically collected in sequences of phases and milestones. Their names and numbers are determined by the control needs of the organization and its stakeholders. For a specific point or period of time you will see:

- Relevant reports
- Contained milestones
- Executed activities
- Involved roles

Work Product Models

APPLIED SAFE IMPLEMENTATION DETAILS



Work Products are grouped in packages. Applied SAFe provides for each package on each level an overview of the work products and their direct relations.

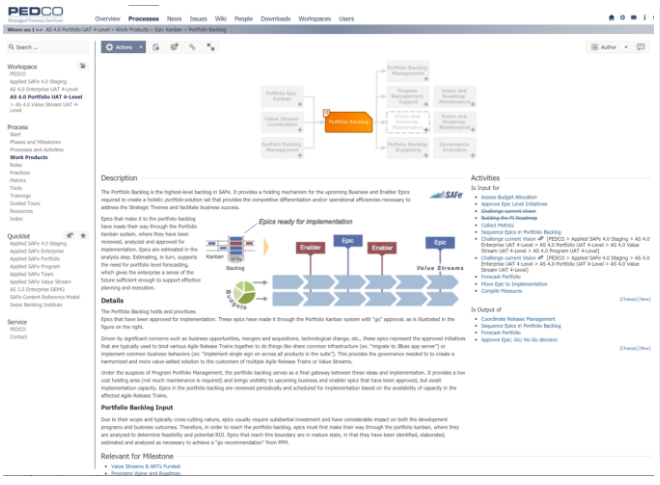
- They are a great help in order to understand dependencies on a larger scale.
- Navigable work product models ease the navigation and enable another view to processes and its results.
- Work products are shown in their relationships and with their direct relations out side of the package.

Work Products

THE OUTPUT OF AN EFFICIENT PROCESS

Work Products

APPLIED SAFE IMPLEMENTATION DETAILS

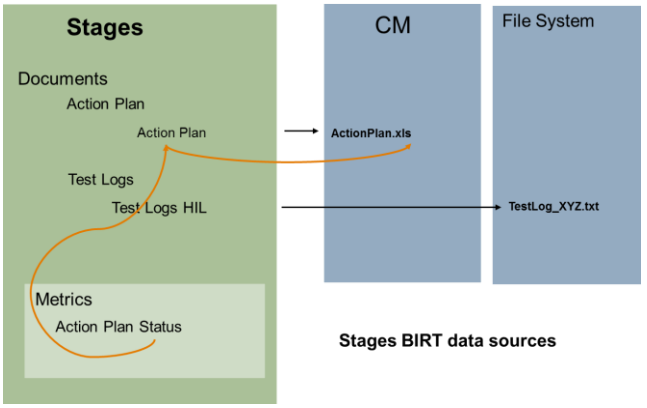


Work Products (Documents, Software, Models, etc.) are the work results of the process and its activities and the most important element of the process.

- Each performed activity leads to a work product.
- Work products stand in dependencies. That means, in order to be able to create a work product certain work products are required.
- Dependencies between work products (WP) are auto-matically determined and rendered in the view of a WP.

Work Products

APPLIED SAFE IMPLEMENTATION DETAILS



Source Stages Metrics Guide 6.4

Work products in Applied SAFe can be stored either in tools, the default stages CMS or in an external CMS.

This is absolutely dependent on the customers company and therefore not possible to create in advance.

Generally, files are to be found at:

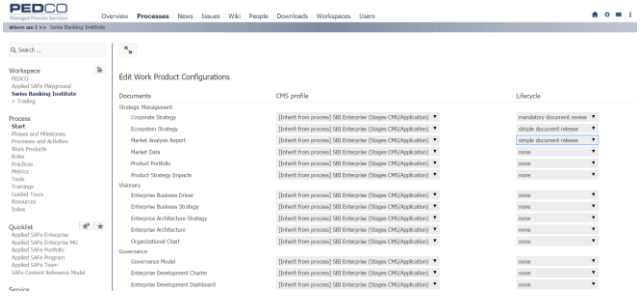
- Tools: (external links)
- External CMS-Systems
- Internal CMS-System
- For each file, a lifecycle model can be allocated; including notification mechanisms.

Work Products

STORE IN CONFIGURATION MANAGEMENT SYSTEMS

Once a CMS has been setup, you can design the lifecycle for each work product and in which CMS it shall be stored; this might be important when you want to differentiate between application (product) and 'project' work products.

On the Action Bar in CMS click on Edit CM Plan:



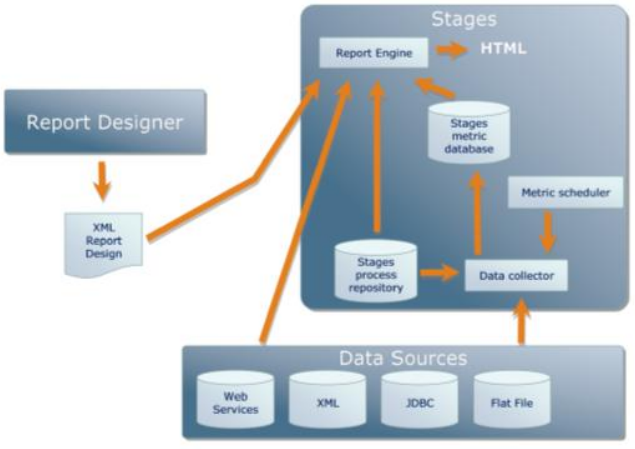
Work products can be stored either in tools, the default stages CMS or in an external CMS.

To setup an external CMS or to use the internal CMS:

- Go to the 'Start'-Page
- From the Action Bar select 'CMS Profiles'
- Then select the following possible CMS from your list.

Concept: Metrics

ARCHITECTURE



Source Stages Metrics Guide 6.4

Report Designer
- BIRT Report Designer. Desktop application which will be used to design the reports. The output is a XML Report Design file.

XML Report Design
- Will be uploaded on a Stages metric page which will be processed (rendered) by the Report Engine.

Report Engine
- Processes the XML Report designs and connects to the Data Sources to retrieve the needed data to display the report (for example Tables and Charts).

Data Collector
- Used to collect information from Data Sources to be placed in the Metric Database on a regular base.

Metric Scheduler
- Triggers the Data Collector to collect the information.

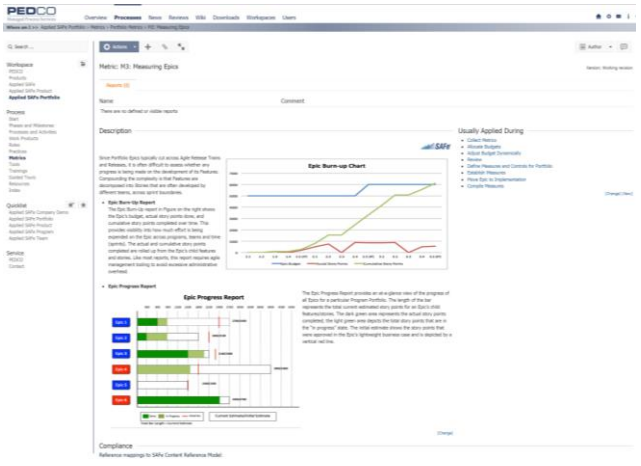
Stages Metric Database
- Located in the Stages database (MySQL or Oracle).

Data Sources
- Contains the information that will be used in reports or collectors.

Stages Process Repository
- The Process Repository holds the process information managed by Stages. (for example artifacts, phases, files, roles, ...).

Metrics

GET THE DATA FROM WHERE THEY EXIST

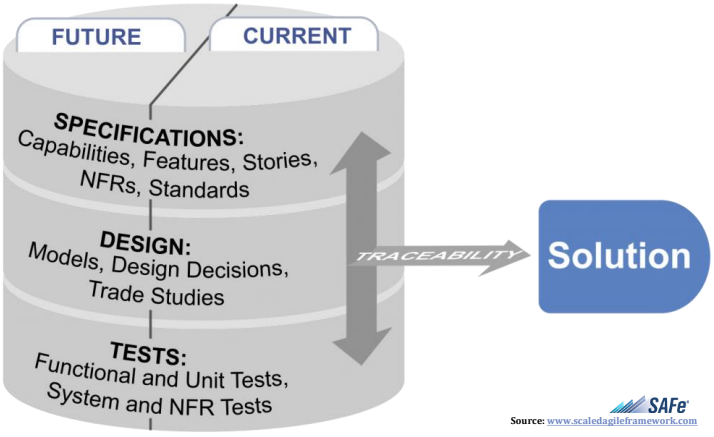


We have predefined some metrics in Applied SAFe. In order to be able to implement it.; we need to know the locations and used tools. For each company.

- It is the intention that metrics are always derived from it original data.
- No data shall be written or produced just to fulfill some metric requirements.
- By defining new metrics, we build on the paradigm of Goal -> Question -> Metric.

New Applied SAFe 4.5: Solution Intent in SAFe

WHAT DOES THE CURRENT SYSTEM NOW, AND WHAT CHANGES ARE INTENDED FOR A FUTURE STATE

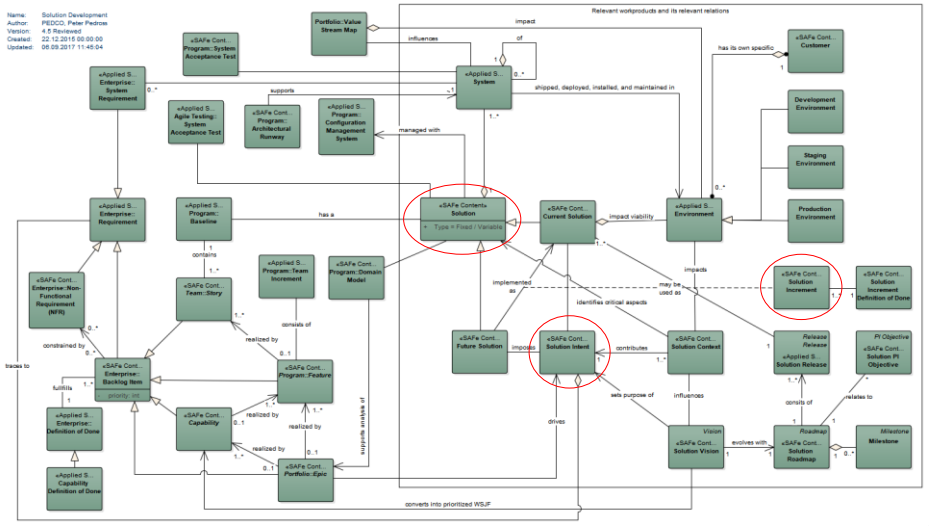


Source: www.scaledagileframework.com

Applied SAFe 4.5: Solution Intent

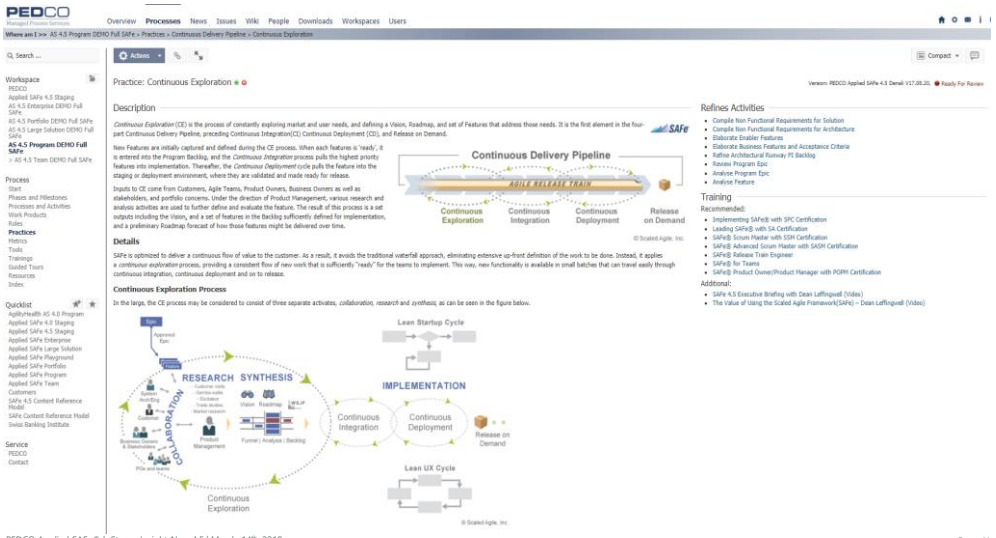
APPLICATION IN DETAIL

Source: www.scaledagileframework.com



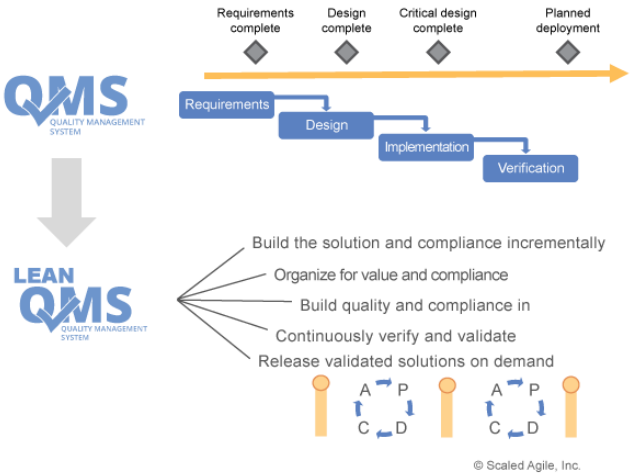
Applied SAFe 4.5 new features

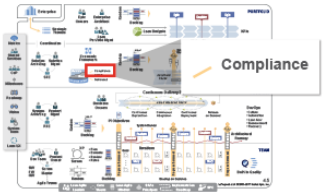
CONTINIOUS DELIVERY - EXPLORATION



Applied SAFe 4.5 new features

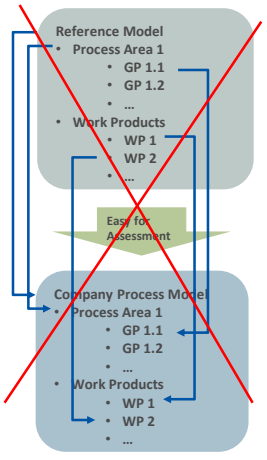
COMPLIANCE, LEAN QUALITY MANAGEMENT SYSTEM (QMS)

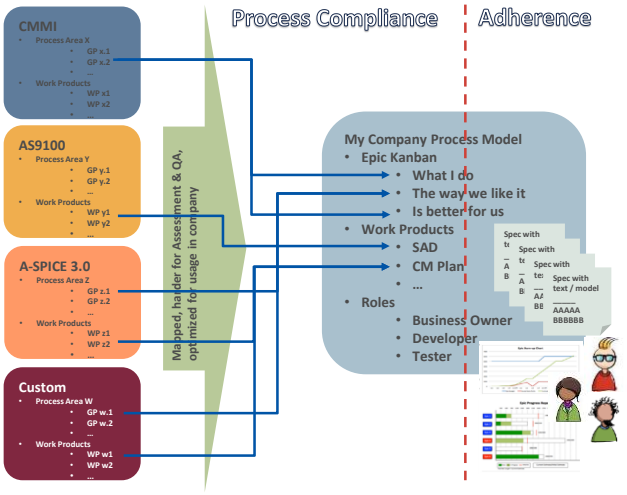




Process Design for regulated Environments

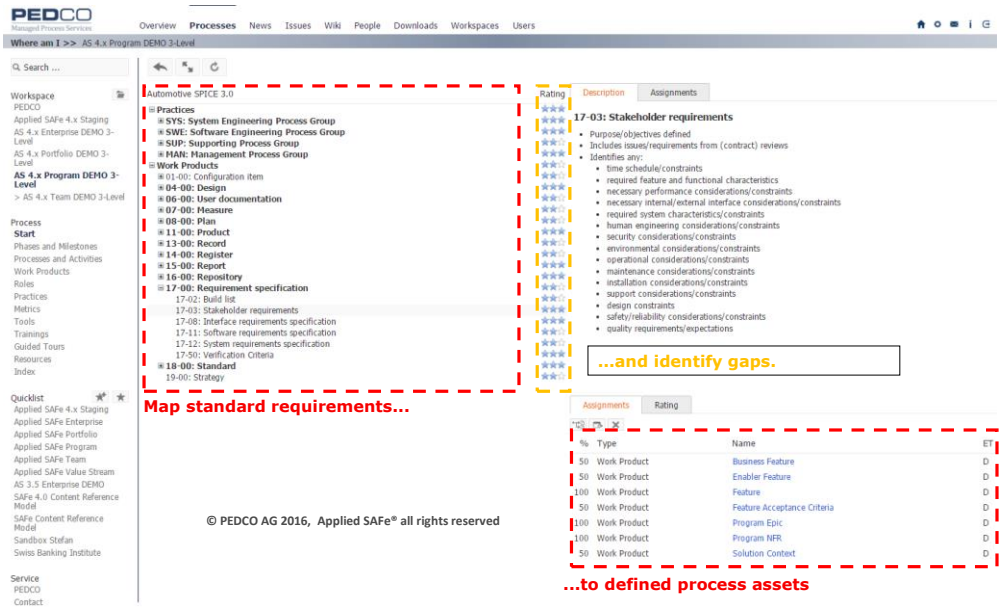
PROCESSES NEED TO COMPLY, NOT TO REPLICATE A REFERENCE MODEL





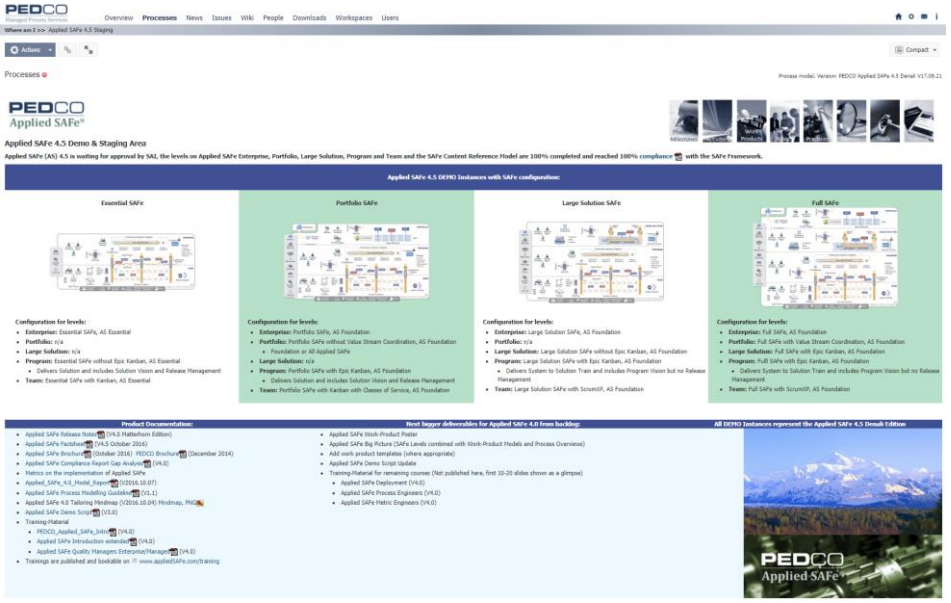
Assure Compliance to Reference Models

ENSURE COMPLIANCE WITH A SUSTAINABLE MECHANISM; AVOID INTERPRETATION GAMES



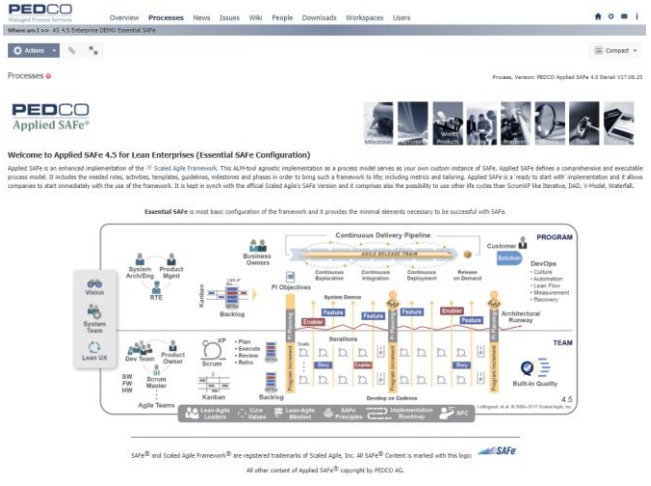
New Applied SAFe 4.5: Configurations

USE OF STANDARD CONFIGURATIONS AS A STARTUP



New Applied SAFe 4.5: Essential SAFe

START SMALL, THINK BIG

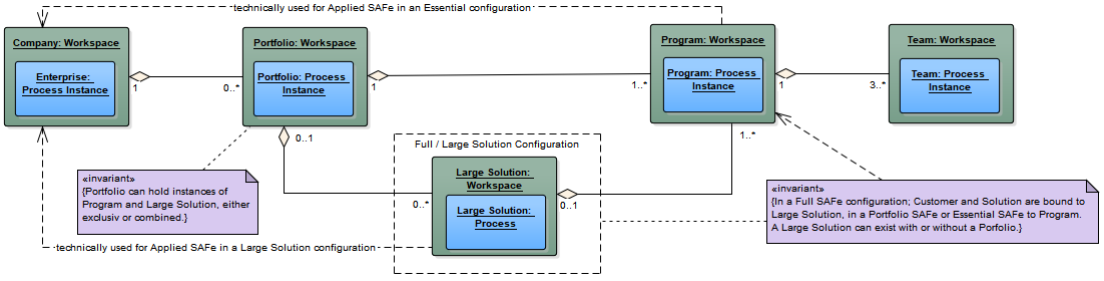


Benefits:

- Start small but still with a powerful implementation of Applied SAFe.
- Eases to start with the minimum required for doing SAFe as a small and cost-effective package to gather first experiences with the application of SAFe.
- Use capability of 'Organizational learning' to perform relentless improvement of your SAFe Implementation
- Launch new trains and portfolio management in a company or in a department.
- Use well known definitions including roles, activities, processes, guidelines, metrics, milestones and phases needed to bring such a framework to life.
- Harmonize teams towards a common approach.
- Migrate directly to other product variations like Managed etc. at a later stage, including your own extensions.

Different use of Process Instances on defined Levels

OVERVIEW OF INSTANTIATIONS WITH DIFFERENT CONFIGURATIONS OF THE SAFE MODEL

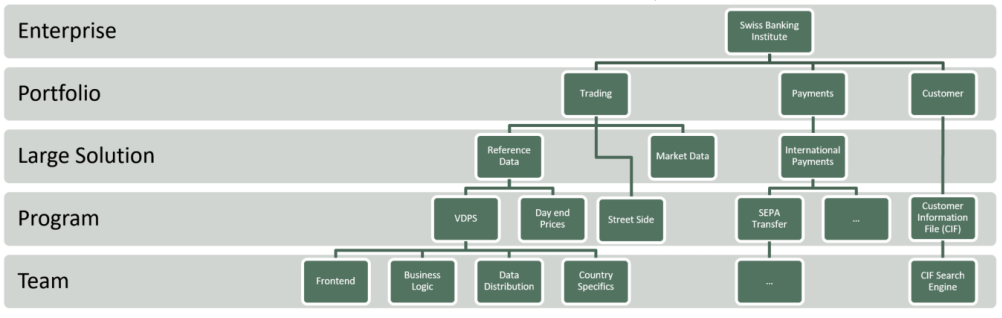


Workspace and Instantiations on a real World (excerpt)

A SWISS BANKING INSTITUTE EXAMPLE

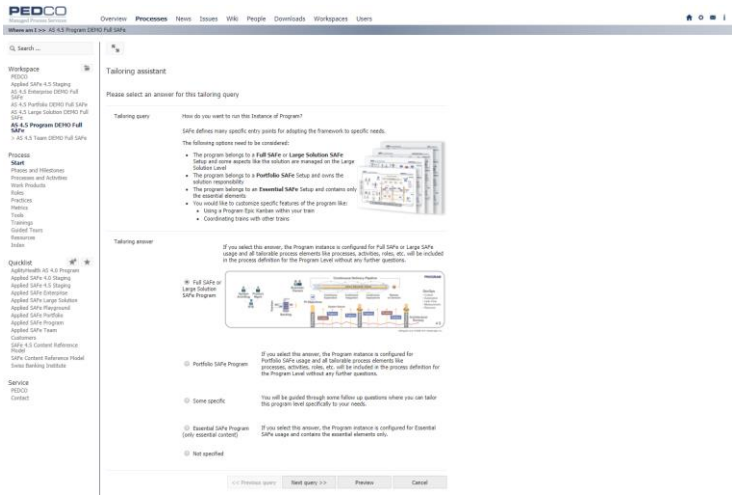
Process Instantiations can be done on any given level.

- In the example below, it would also be possible to start with SAFe 4.5 Large Solution Creation within one Portfolio and start with system engineering on this particular portfolio, without interfering with the other portfolios.



Manage Process Variation

CUSTOMIZATION - TAILORING



Benefits:

- Scale up to the full power of Applied SAFe to specific needs of company, portfolios, value streams, programs and teams. By using pre-built automating tailoring you can make use of different possibilities like:
- Allow to coordinate the Program Backlogs of several ART's for a Value Stream on Portfolio.
- Allow ART's to run their own Program Epic Kanban.
- As an option, we offer compliance mapping(s) to existing reference models (CMMI, AS9100, ISO 9000).

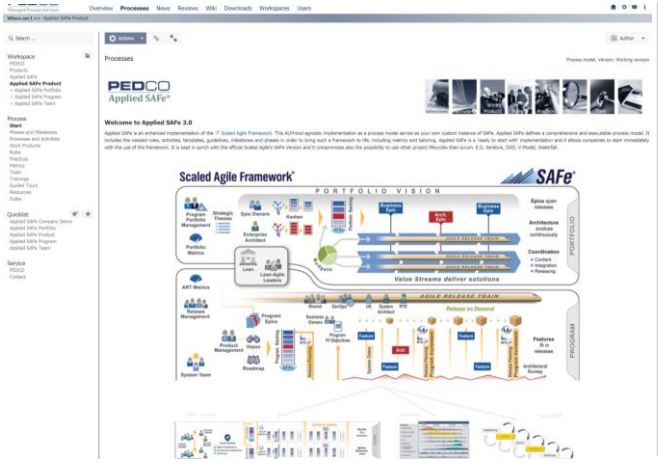
Manage Process Variation

DEMO IN APPLIED SAFE

- **Linda is an Agile Release Train Engineer**
- **Linda knows the company very well**
- **The program has run one PI so far.**
- **Linda has several years experience in IT and project management.**
- **Linde loves to manage and is PMI-certified Project Manager.**
- **She is also certified Scaled Agilest and has some knowledge of SAFe.**
- **Linda wants to tailor the process accordingly to what was decided during I&A**

Extend and Integrate Processes

INTEGRATION WITH OTHER PRACTICES, SOP'S AND LIFE CYCLES FROM EXISTING PAL



- It is common, that in larger companies, a lot of practices, standard operating procedures exist
- It is also common, that different life cycle models are concurrently executed in the same company.
- Applied SAFe comes already with strategies, concepts and guidelines on how such integration and extension can be done.

  E.g. on practice: Technical Strategies for Agile and Waterfall Interoperability at Scale

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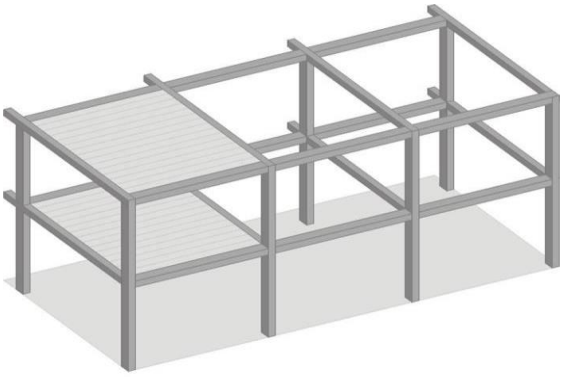
An agile skeleton approach to build up requirements

A STEP BY STEP SOLUTION BUILT ON A DOMAIN SPECIFIC SKELETON

A complete big upfront documentation (BUFD) of requirements is neither practicable nor enforceable.



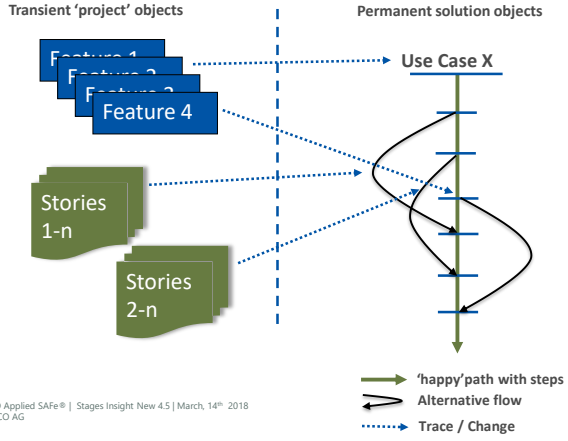
A possible solution:

- Start with a useful patchwork documentation
- Base on a skeleton, completed step-by-step by following the natural evolution of the solution.
- Create guidelines supporting an evolutionary and incremental documentation.
- Acceptance criteria are not filled out, but trace to the right point into the skeleton.
- Skeleton holds all attributes to scale up, support the needed flexibility and support for variations; but must not contain all content in advance.
- ✓ An agile approach is best to comply

Discussion: What happens to existing, long-lasting solutions?

FEATURES AND STORIES DRIVE COLLABORATION, CLARIFICATION, SPECS & DESIGN

Depending on the attributes of a solution it might be necessary to extend DoD and adapt to existing documentation. E.g. when a solution already exists since a 25 years you may don't want to have kind of documentation and you need to separate between transient (change) objects and solution specific work products. **EXAMPLE**

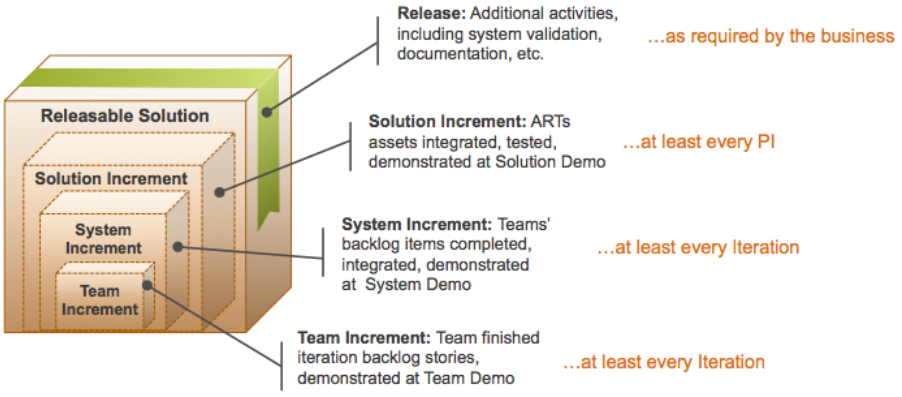


Some typical attributes

- Expected lifetime
- Existing solution incl. documentation
- Business criticality
- Indented use, internal / external
- Safety classification
- Security classification
- Expected maintenance effort
- Expected and complexity of solution
- Expected size of solution
- Used life cycles
- …

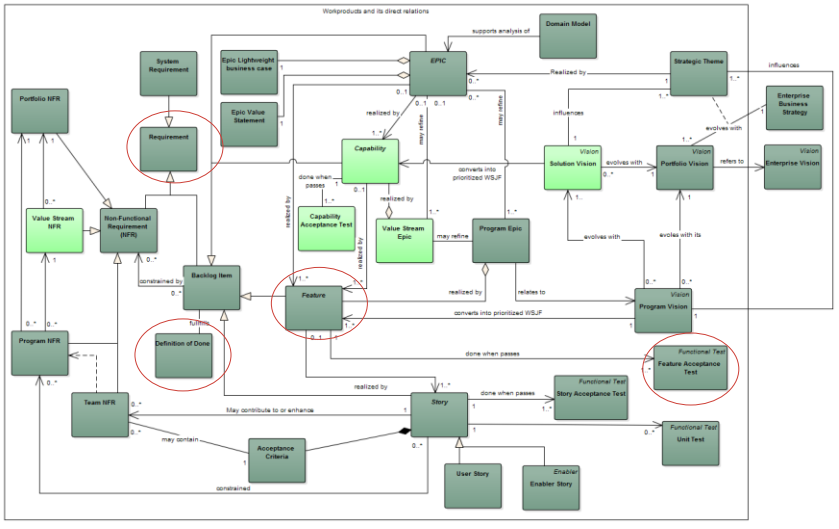
Applied SAFe 4.5 New Features

DEFINITION OF DONE (DOD) IN SCALED AGILITY



Definition of Done (DoD), stories and requirements

RELATIONSHIPS WITH REQUIREMENTS

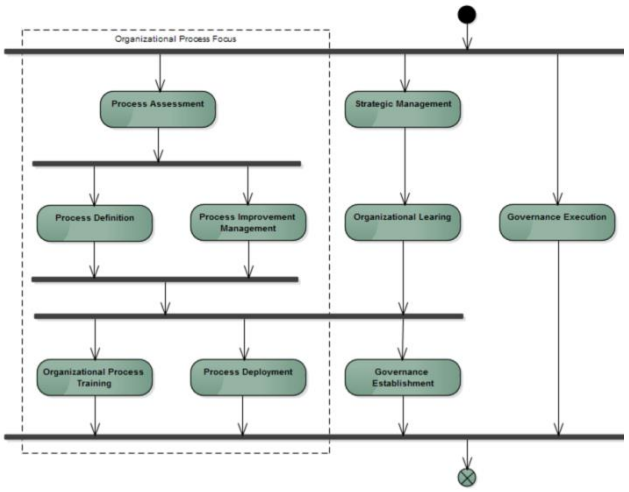


Applied SAFe 4.5 new features

IMPLEMENTATION ROADMAP

“Level-5” Quality Processes for Agile Organizations

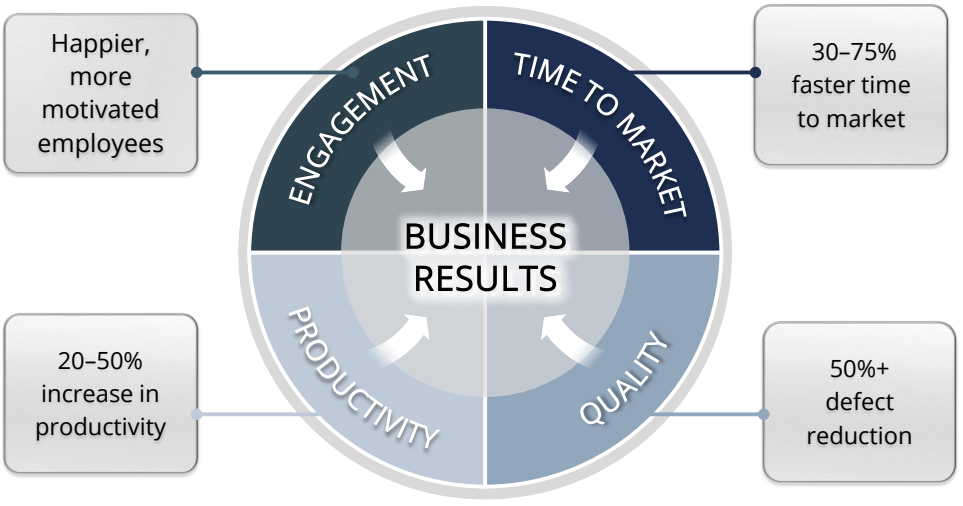
METHODS AND PROCESSES FOR COMPLIANCE WITHIN REGULATED ENVIRONMENTS

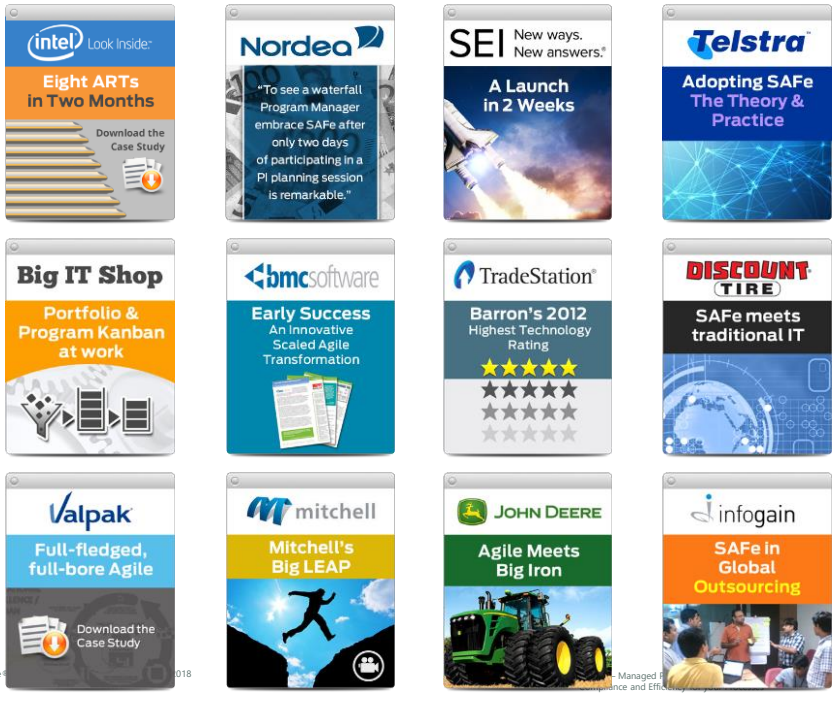


- Pilot, train and verify process improvements and process changes.
- Learn as a system, not as individuals.
- Share available knowledge.
- Use defined metrics.
- Work with proven best practices.
- Ensure that knowledge doesn’t get lost.
- Inspire people to question the status quo.
- Ensure feedback cycles and structured improvement of PAL.

Some business results of case studies

See ScaledAgileFramework.com/**case-studies**





Applied SAFe at a glance

67% Less discussion time on how to interpret SAFe.

Person-years saved of definition work within Applied SAFe based rollout **16PY**

2/3
Reduced ramp-up time for new hires

> 440 Built-in configuration and tailoring options

80-100%
Reuse rather then re-invent

100%
Solid comprehensive implementation of SAFe as each version is approved by its inventors

Level 5
20 SAFe add-on processes for compliance within regulated environments

27 Defined Reference Models.

Proof Compliance with minimal effort for reference models like
CMMI, A-SPICE 3.0, IEC 62304, FDA, FAA

2 Years
Reduced cost of delay

50%-61%
Changed content with each new SAFe Release

4360
Defined process elements

33%
faster process improvement with built-in organizational learning

3 days
Training effort to engineer Applied SAFe by yourself

Ready to Scale Agility?

EXPLORE MORE

- Wonder if SAFe is the right thing for you?
- Wonder how Applied SAFe could be of benefit for you?
- Worried about compliance of your processes?

- Get in contact with us!
  - To setup an individual conversation on a potential fit.
  - To start an evaluation of Applied SAFe.
  - To explore further details like SAFe Implementation Roadmap, licensing, alignment, agile supplier management or other points of interest.

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Questions? Discussion?

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