SEMAT

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Extending the Kernel with Practices to Create Methods

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Outline

- Scrum Practice – Reference Example

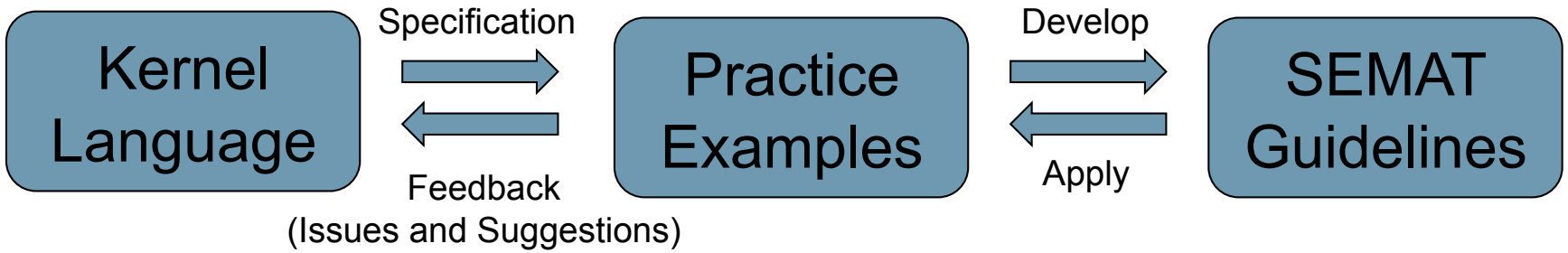
- Defining the Scrum Practice

- Authoring the Practice in the EssWork Practice Workbench

- Questions

Objective

- Exercise the SEMAT Kernel and Language



- Illustrate the SEMAT approach
  - One example of how the Scrum practice may be mapped to the SEMAT Kernel and Language

- Develop and apply methods for projects
  - Agile requirements with User Stories and/or Use Cases practices
  - Agile project management with Scrum or "Scrum-like" practices

About Scrum

- Scrum consists of Scrum Teams and their associated roles, events, artifacts, and rules.
- Scrum's roles, artifacts, events, and rules are immutable and although implementing only parts of Scrum is possible, the result is not Scrum.

- Source
  - K. Schwaber and J. Sutherland, "The Scrum Guide", Scrum.org, October 2011.
  - http://www.scrum.org/storage/scrumguides/Scrum_Guide.pdf

Scrum Concepts

- Scrum team (roles)
  - Product Owner
  - Development Team (of developers)
  - Scrum Master
- Scrum artifacts
  - Product Backlog
  - Sprint Backlog
  - Increment
- Scrum events
  - The Sprint
  - Sprint Planning Meeting
  - Daily Scrum
  - Sprint Review
  - Sprint Retrospective

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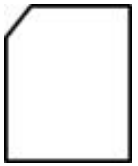
Step 0: SEMAT Kernel & Essence Language Concepts

- A standard **Kernel** provides a baseline starting point – a "map" of the software development endeavour.
- **Practices** add details and provide specific guidance on particular aspects of the software development
- Key language concepts: **Alpha**, **Activity Space**, **Work Product** and **Activity**

Kernel

Practice

Alpha

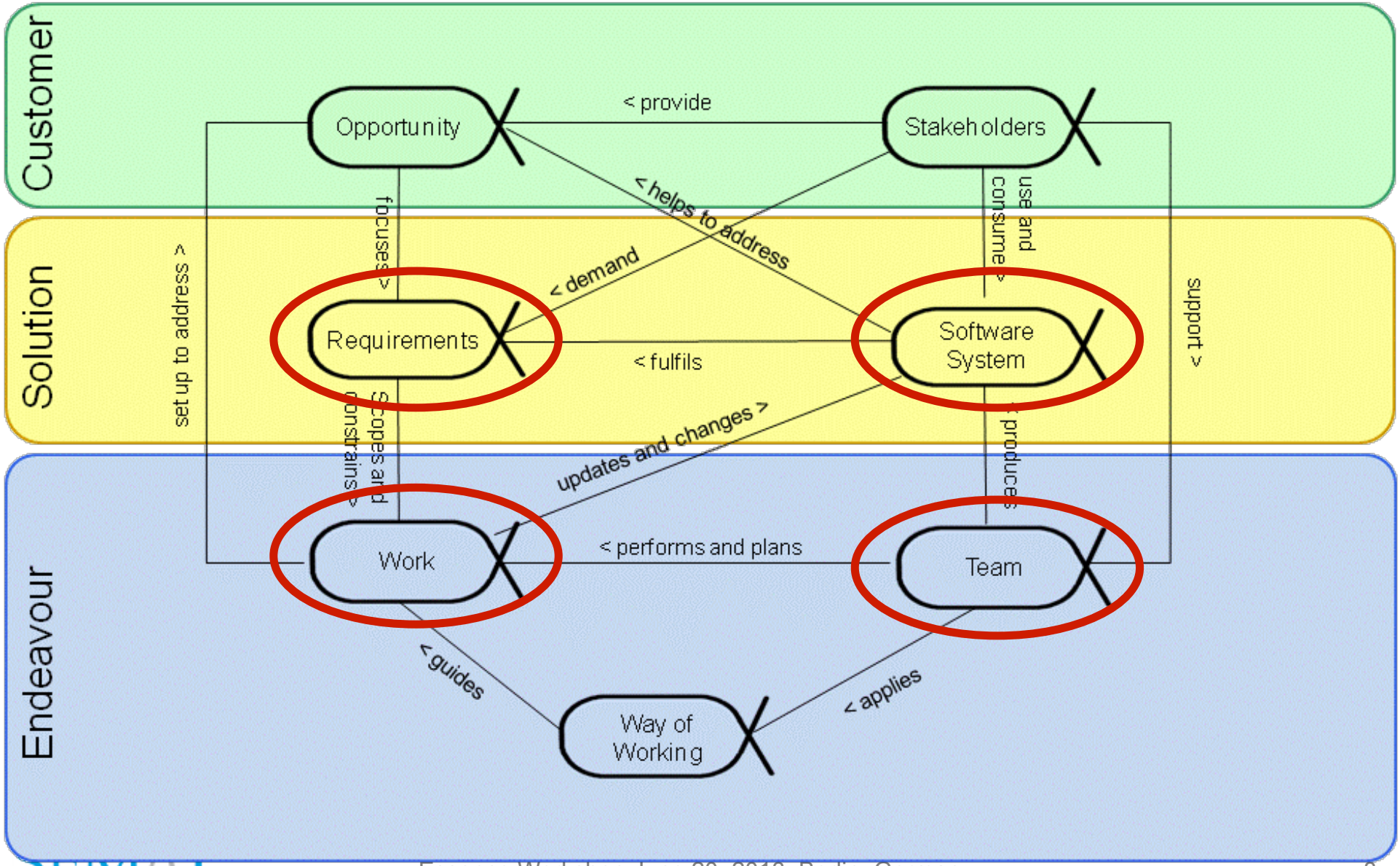


Work Product

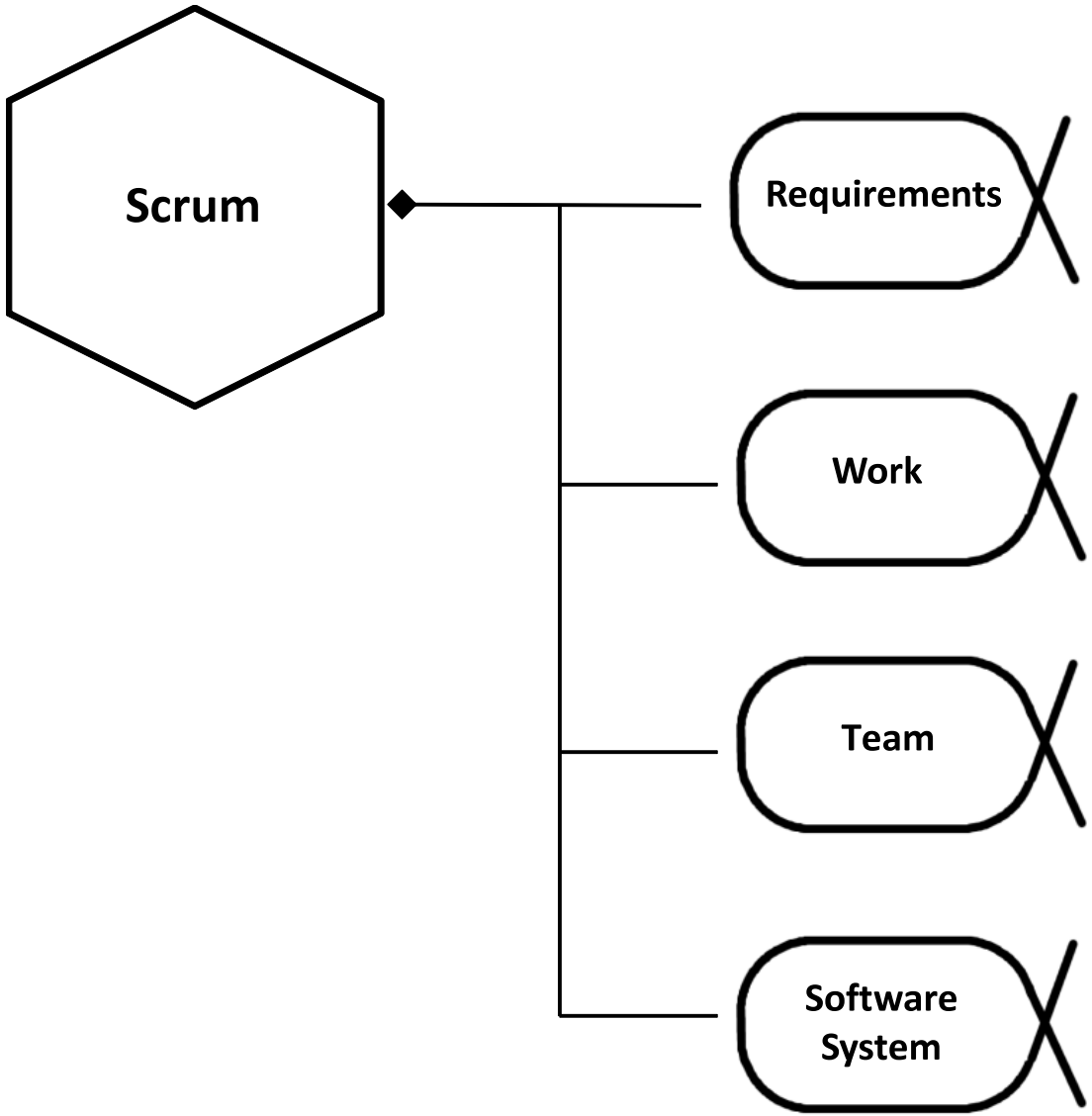
Activity Space

Activity

Step 1a: Identify relevant Kernel Alphas

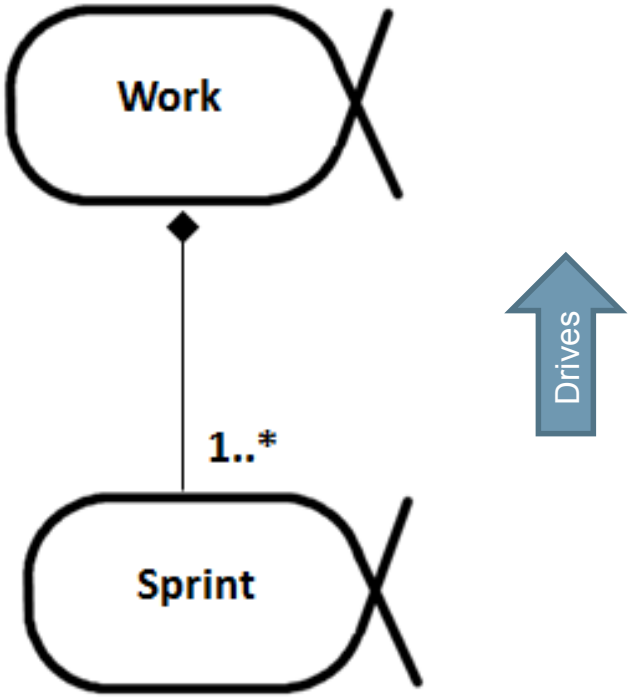


Step 1b: Outline the Scrum Practice



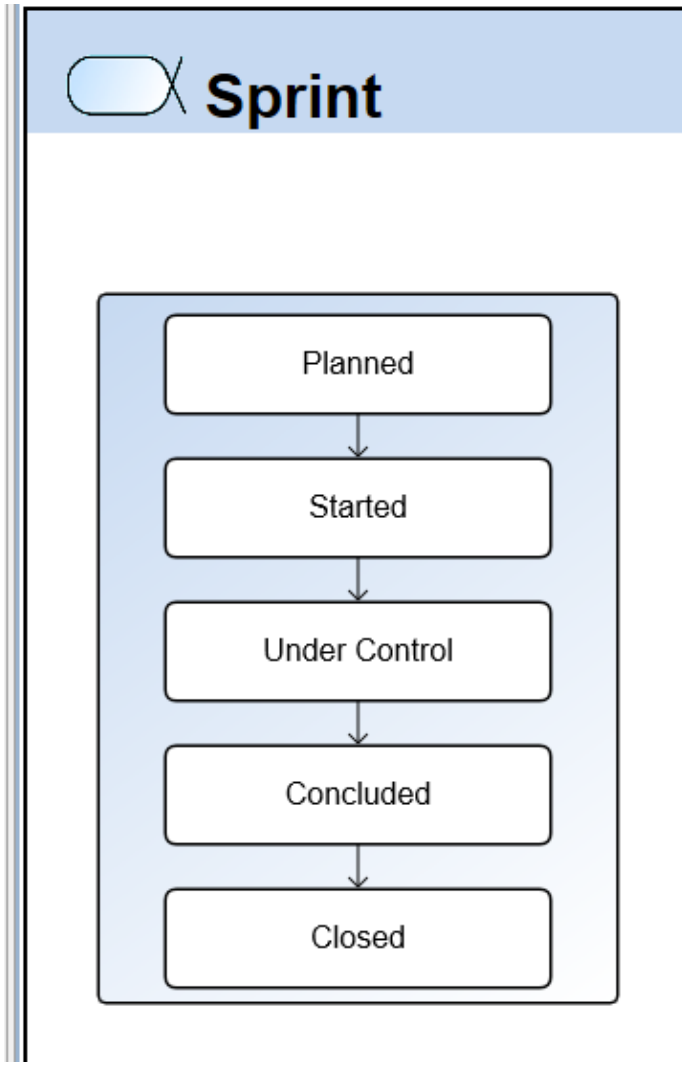
Step 2a: Add sub-alphas

- Extending the Work Alpha

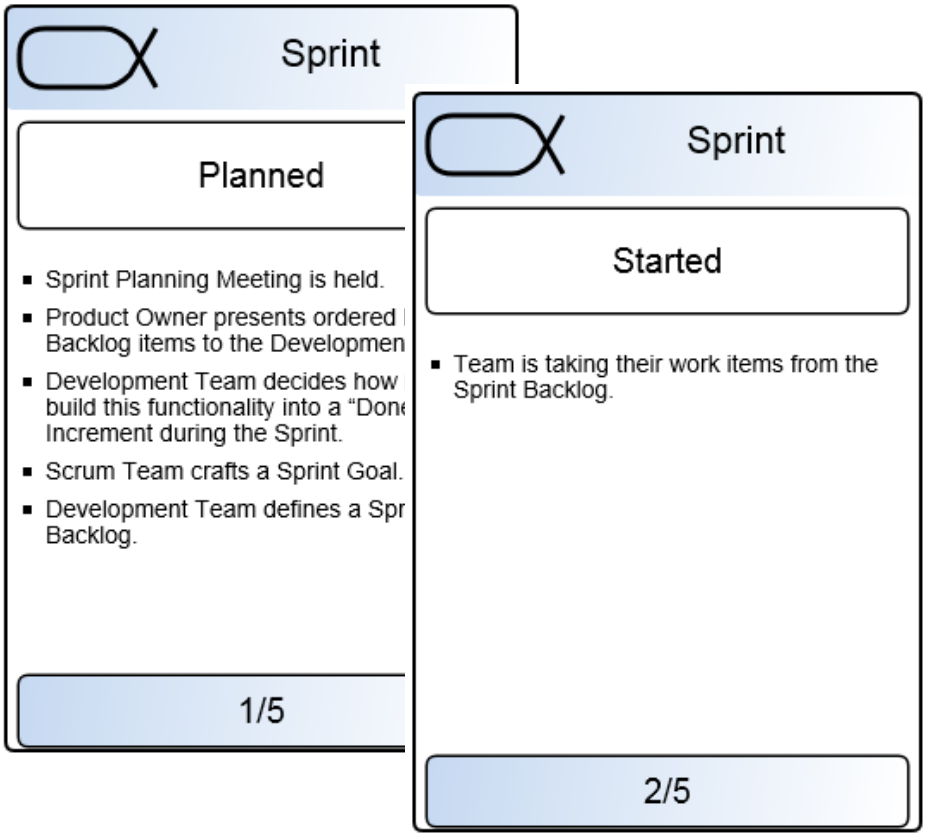


- The Work alpha is typically used for the duration of a development project that may cover a number of sprints.
- Thus we define a new sub-alpha called **Sprint**.
- Sub-alphas drive their parent alphas

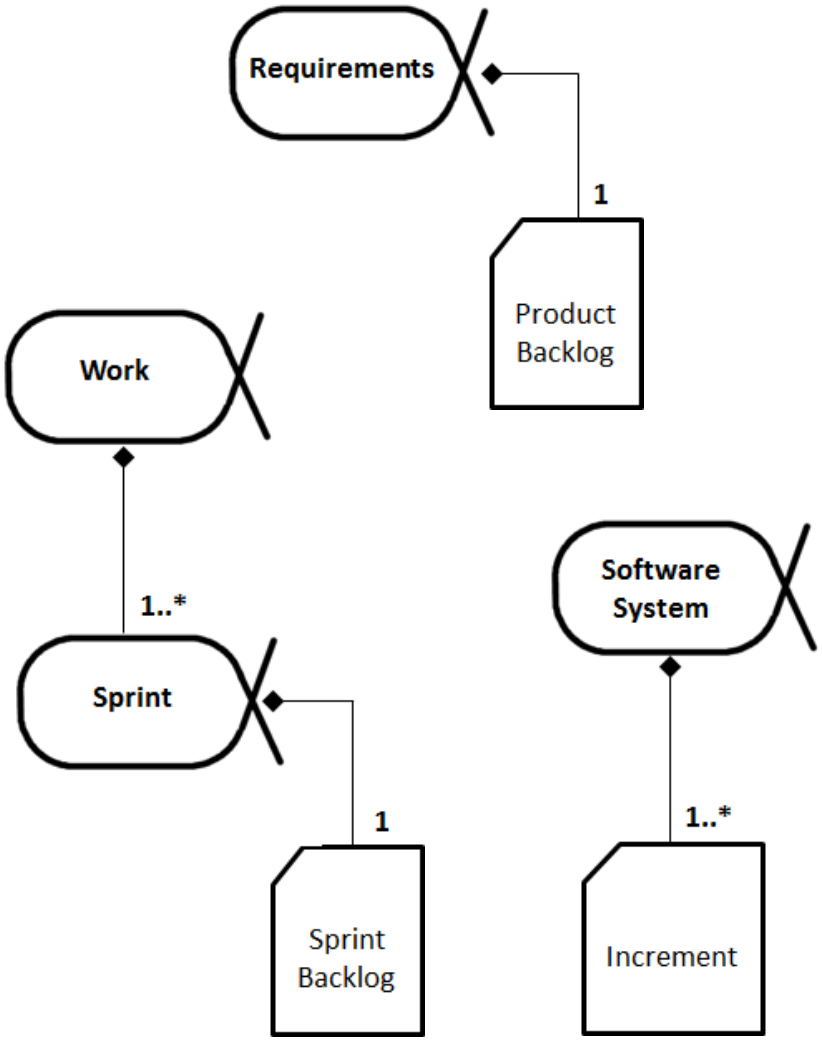
Step 2b: Define alpha states and checkpoints



- Specific Scrum rules are defined as part of the alpha state checkpoints.

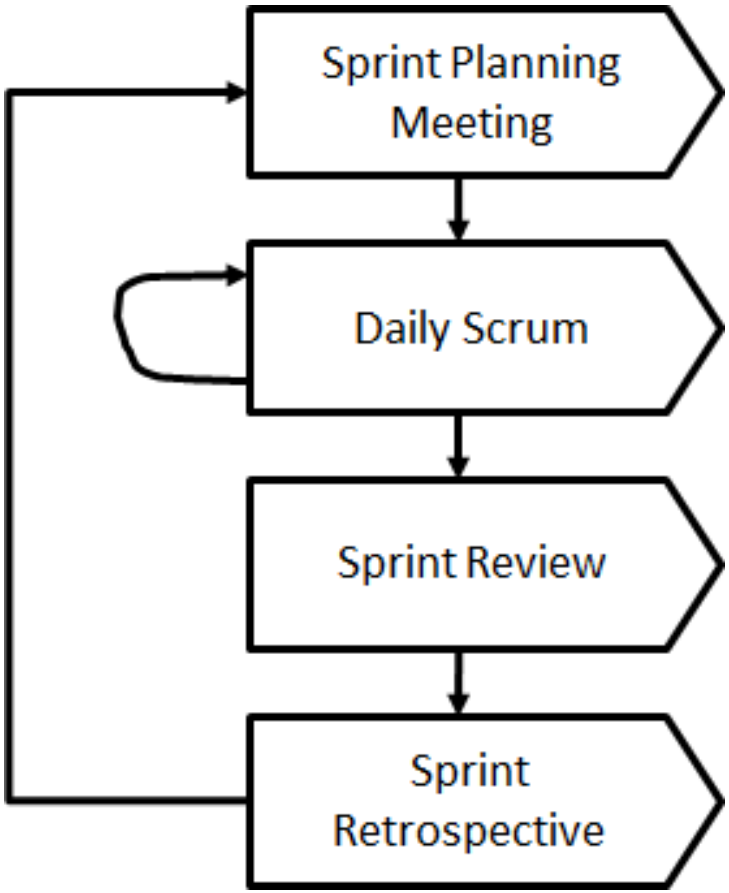


Step 3: Add Work Products



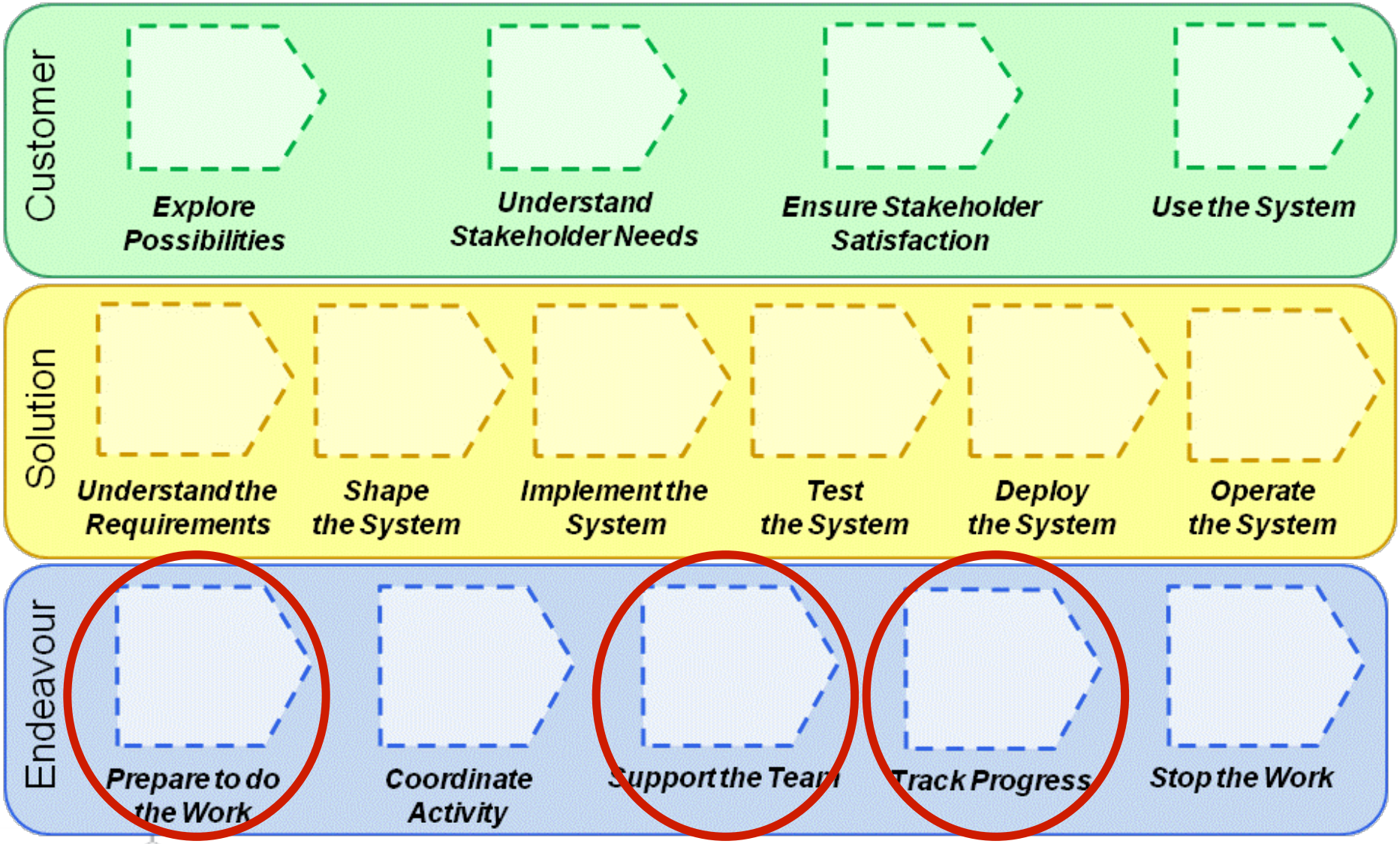
- "The **Product Backlog** is an ordered list of everything that might be needed in the product and is the single source of requirements for any changes to be made to the product."
- "The **Sprint Backlog** is the set of Product Backlog items selected for the Sprint plus a plan for delivering the product Increment and realizing the Sprint Goal."
- "The **Increment** is the sum of all the Product Backlog items completed during a Sprint and all previous Sprints."

Step 4a: Define Activities

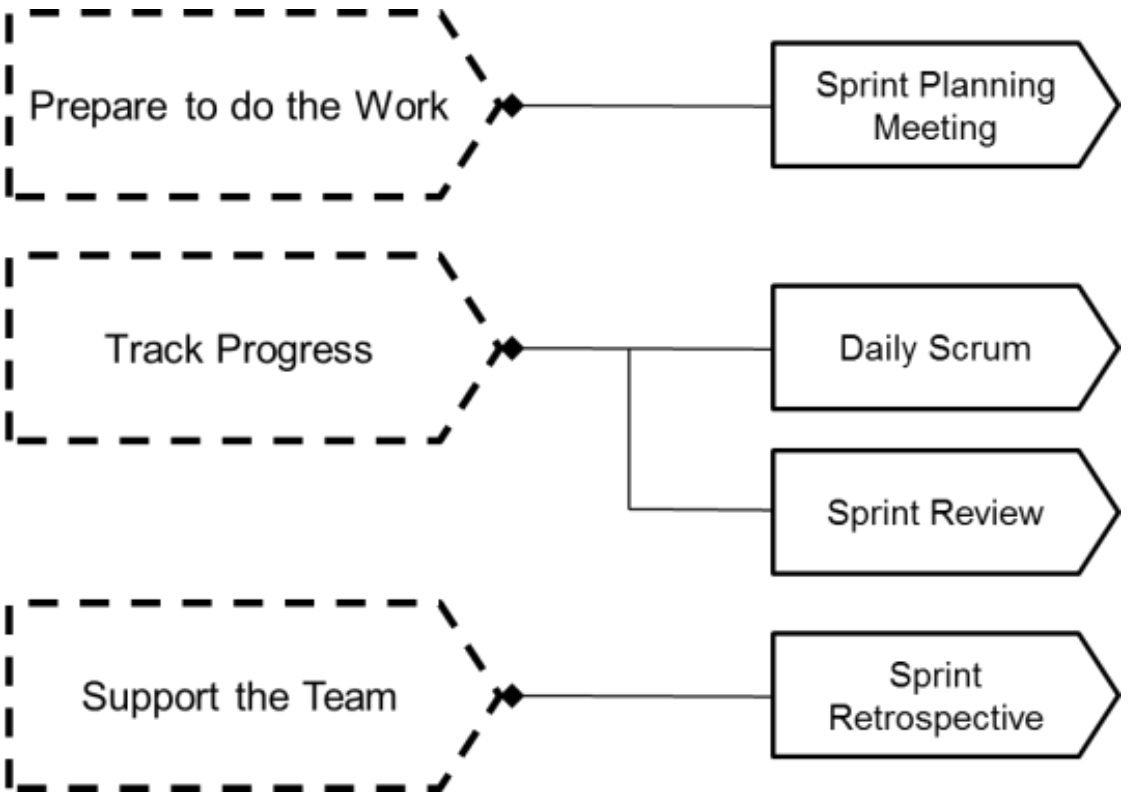


- "The work to be performed in the Sprint is planned at the Sprint Planning Meeting."
- "The Daily Scrum is a 15-minute time-boxed event for the Development Team to synchronize activities and create a plan for the next 24 hours."
- "A Sprint Review is held at the end of the Sprint to inspect the Increment and adapt the Product Backlog if needed."
- "The Sprint Retrospective occurs after the Sprint Review and prior to the next Sprint Planning Meeting."

Step 4b: Identify relevant Kernel Activity Spaces



Step 4c: Relate activities to Kernel Activity Spaces



- NB! Just one possible suggestion. The organization depends amongst others on how one interpret and define the completion criteria of the Activities.

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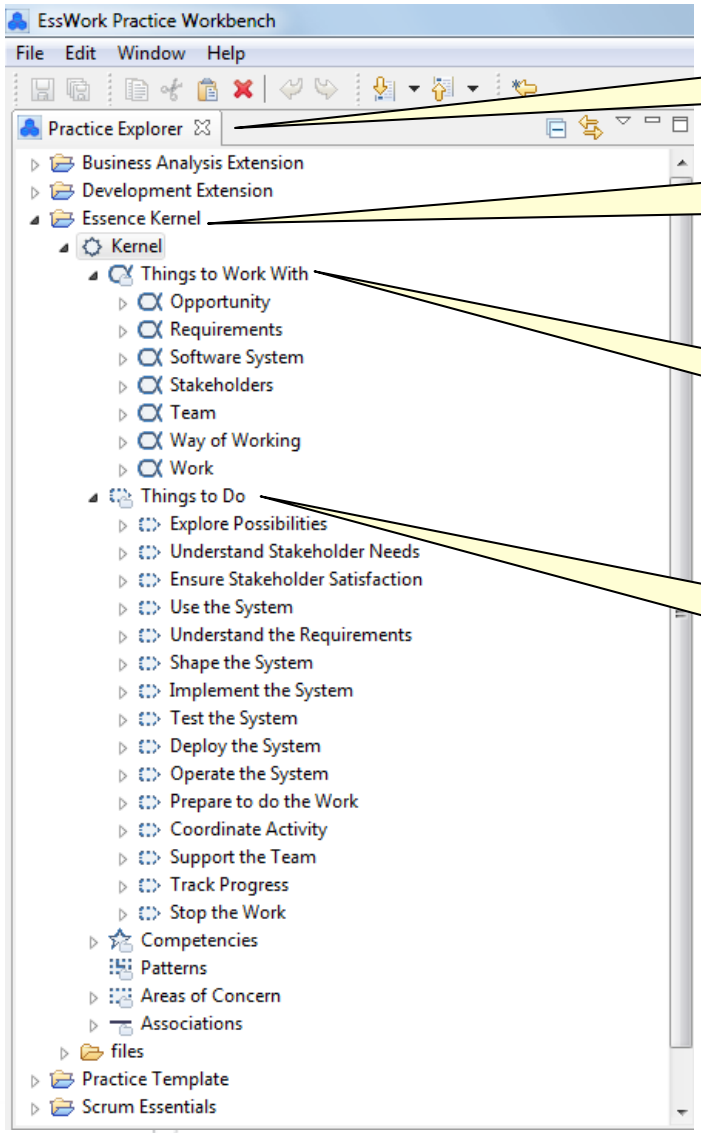
Practice Explorer



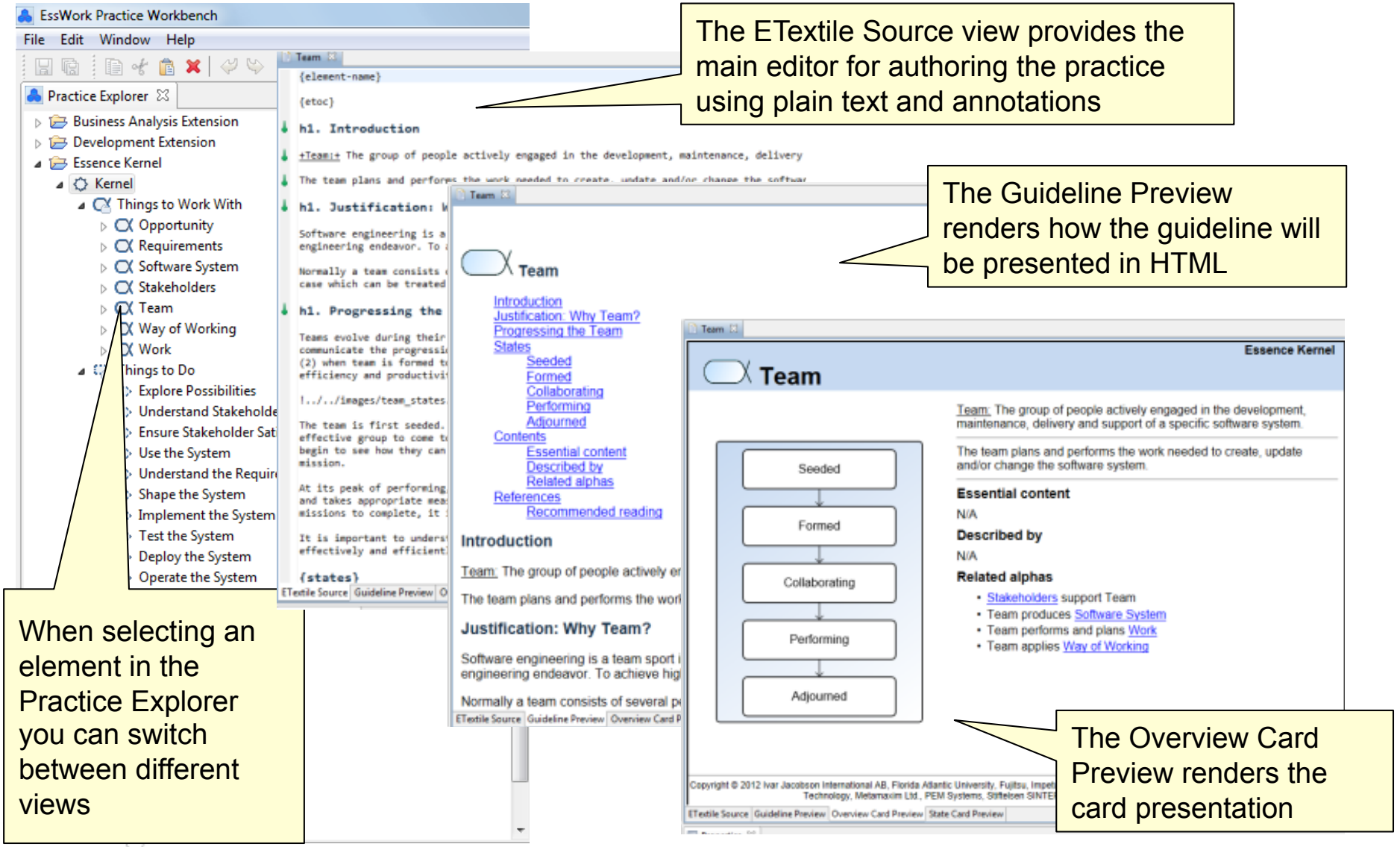
The Practice Explorer shows Practice Workbench projects

The Essence Kernel project contains the elements defined in the OMG Essence specification

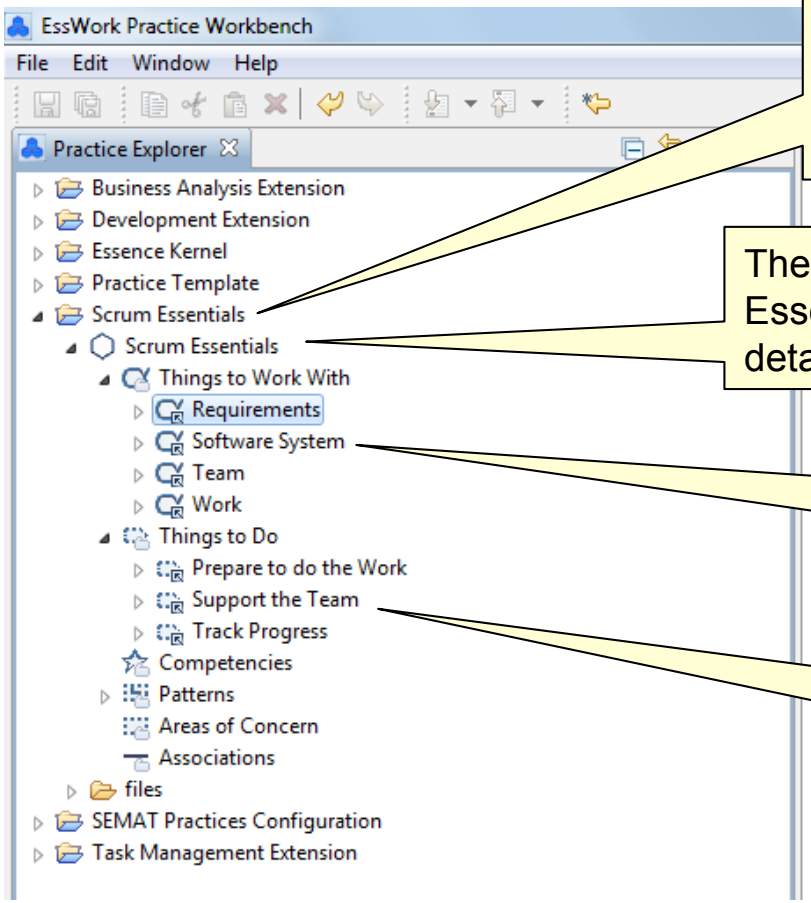
Alphas that represent the essential things to work with

Activity Spaces that represent the essential things to do

ETextile, Guideline and Card views



Scrum Essentials



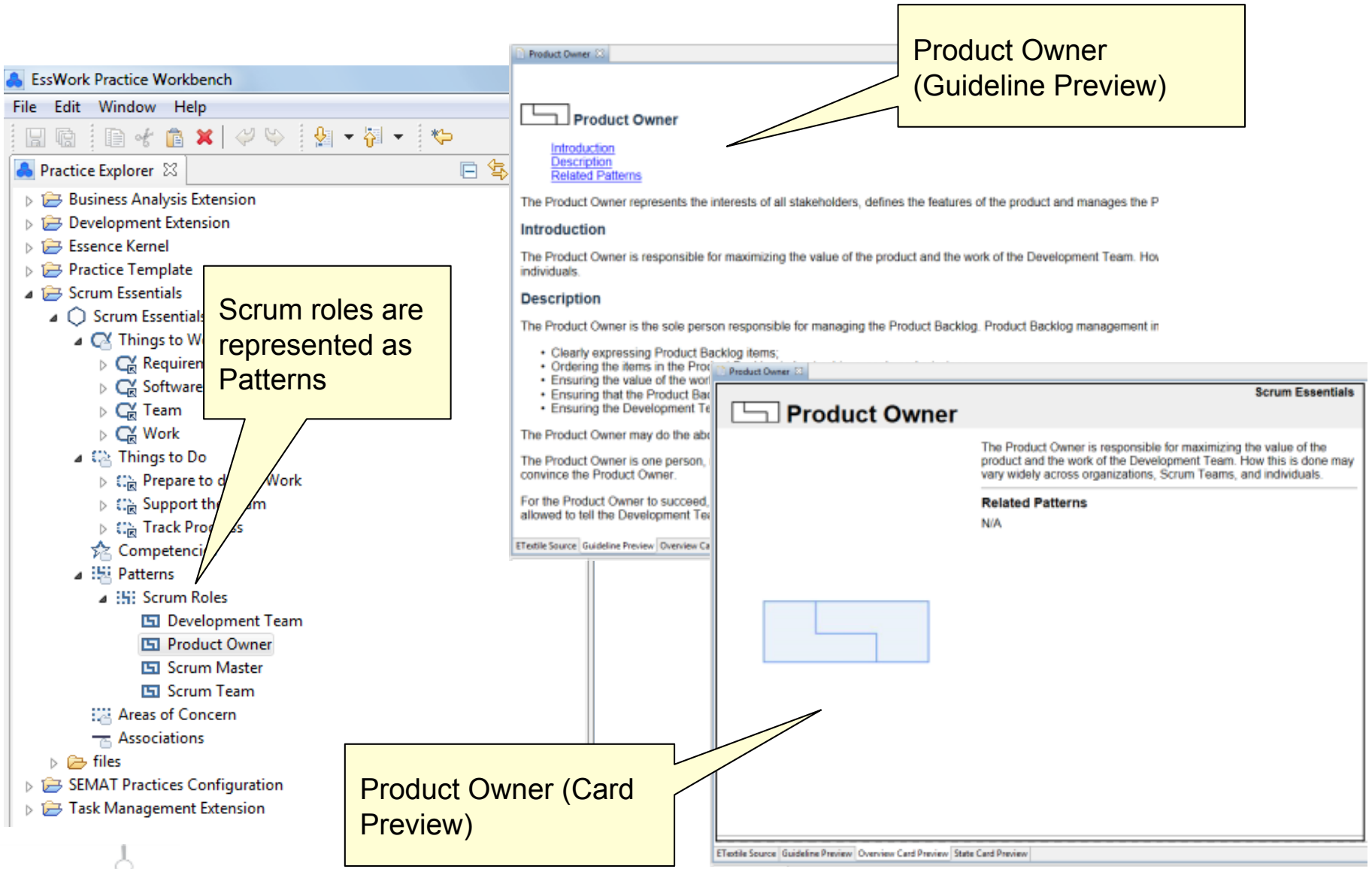
The Scrum practice is created as a separate practice project in the Practice Workbench

The Scrum practice extends the Essence Kernel by providing more detailed guidance.

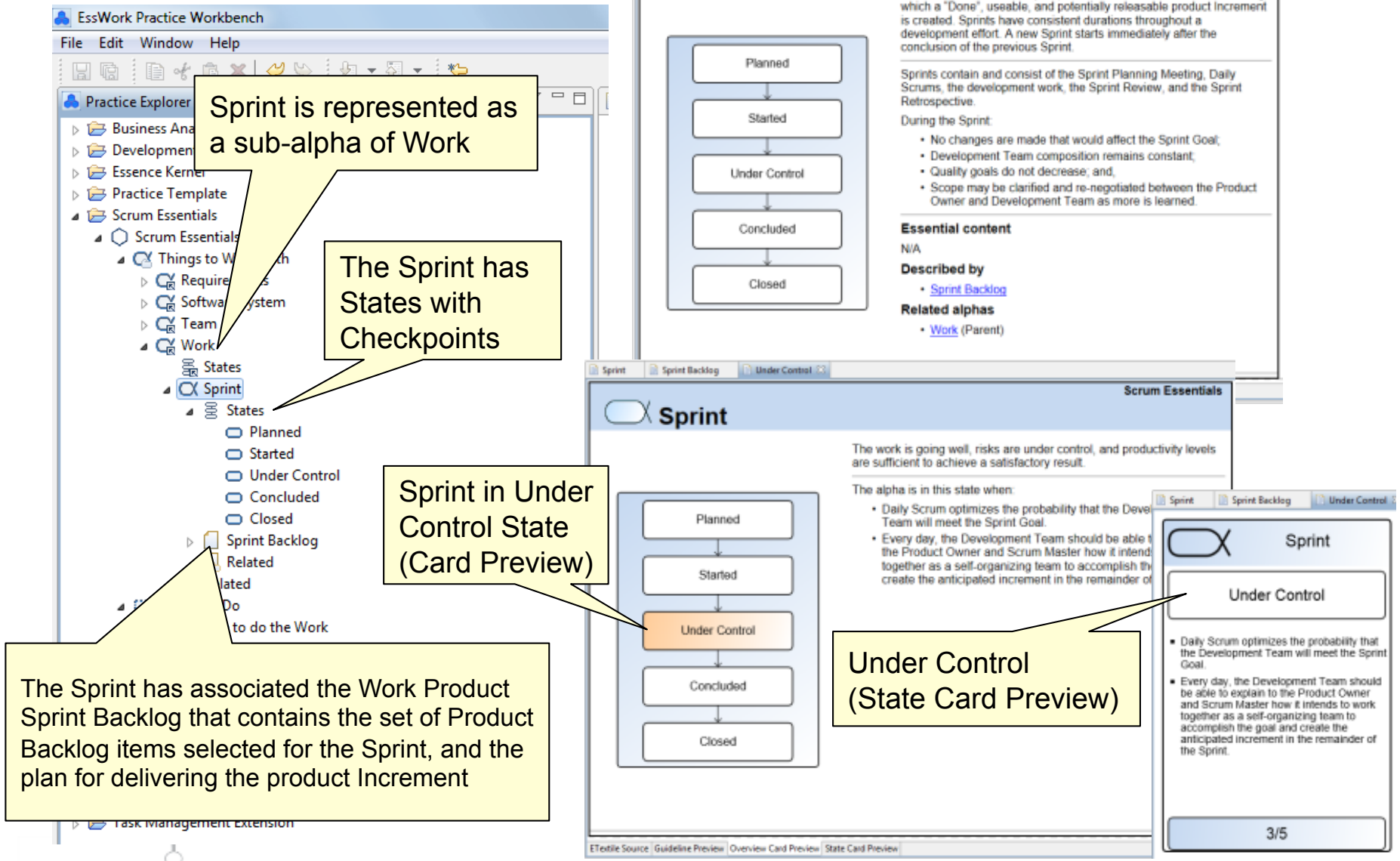
Drag and drop the relevant Alphas to extend from the Essence Kernel into the Scrum practice project

Drag and drop the relevant Activity Spaces to extend from the Essence Kernel into the Scrum practice project

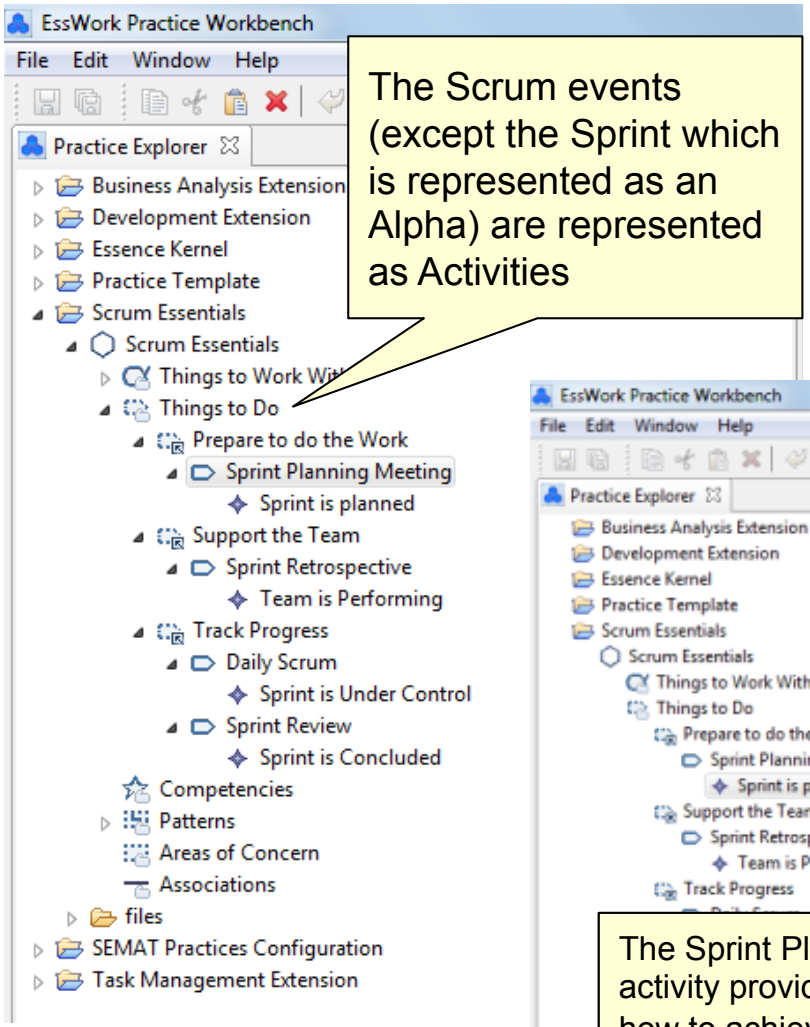
Scrum Roles


EssWork Practice Workbench
File Edit Window Help
Practice Explorer
Business Analysis Extension
Development Extension
Essence Kernel
Practice Template
Scrum Essentials
Scrum Essentials
Things to W
Requiren
Software
Team
Work
Things to Do
Prepare to d Work
Support th m
Track Pro s
Competenci
Patterns
Scrum Roles
Development Team
Product Owner
Scrum Master
Scrum Team
Areas of Concern
Associations
files
SEMAT Practices Configuration
Task Management Extension
Scrum roles are represented as Patterns
Product Owner
Product Owner (Guideline Preview)
Introduction
Description
Related Patterns
The Product Owner represents the interests of all stakeholders, defines the features of the product and manages the P
Introduction
The Product Owner is responsible for maximizing the value of the product and the work of the Development Team. Hov
individuals.
Description
The Product Owner is the sole person responsible for managing the Product Backlog. Product Backlog management in
Clearly expressing Product Backlog items;
Ordering the items in the Pro
Ensuring the value of the wor
Ensuring that the Product Ba
Ensuring the Development Te
The Product Owner may do the ab
The Product Owner is one person,
convince the Product Owner.
For the Product Owner to succeed,
allowed to tell the Development Te
ETextile Source Guideline Preview Overview Ca
Product Owner
Scrum Essentials
Product Owner
The Product Owner is responsible for maximizing the value of the product and the work of the Development Team. How this is done may vary widely across organizations, Scrum Teams, and individuals.
Related Patterns
N/A
ETextile Source Guideline Preview Overview Card Preview State Card Preview
Product Owner (Card Preview)

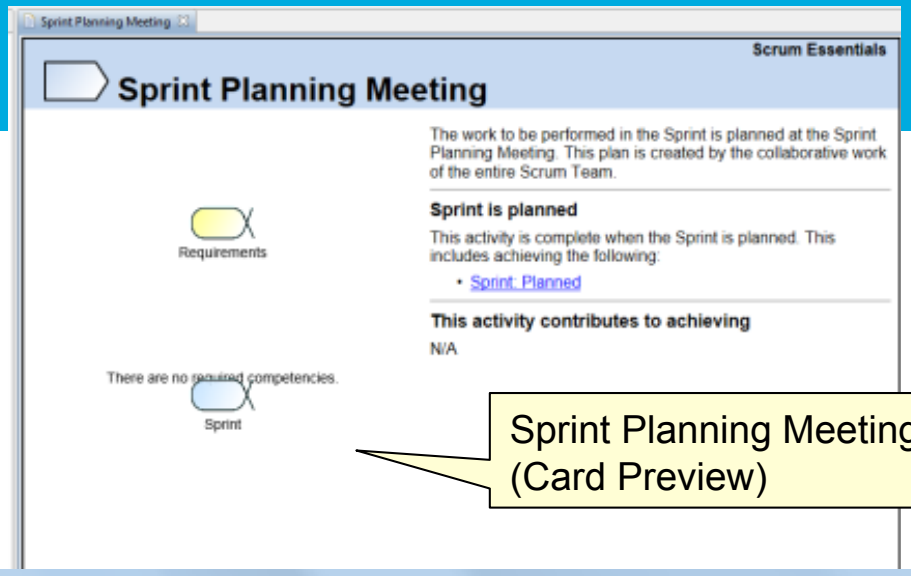
Scrum Sprint



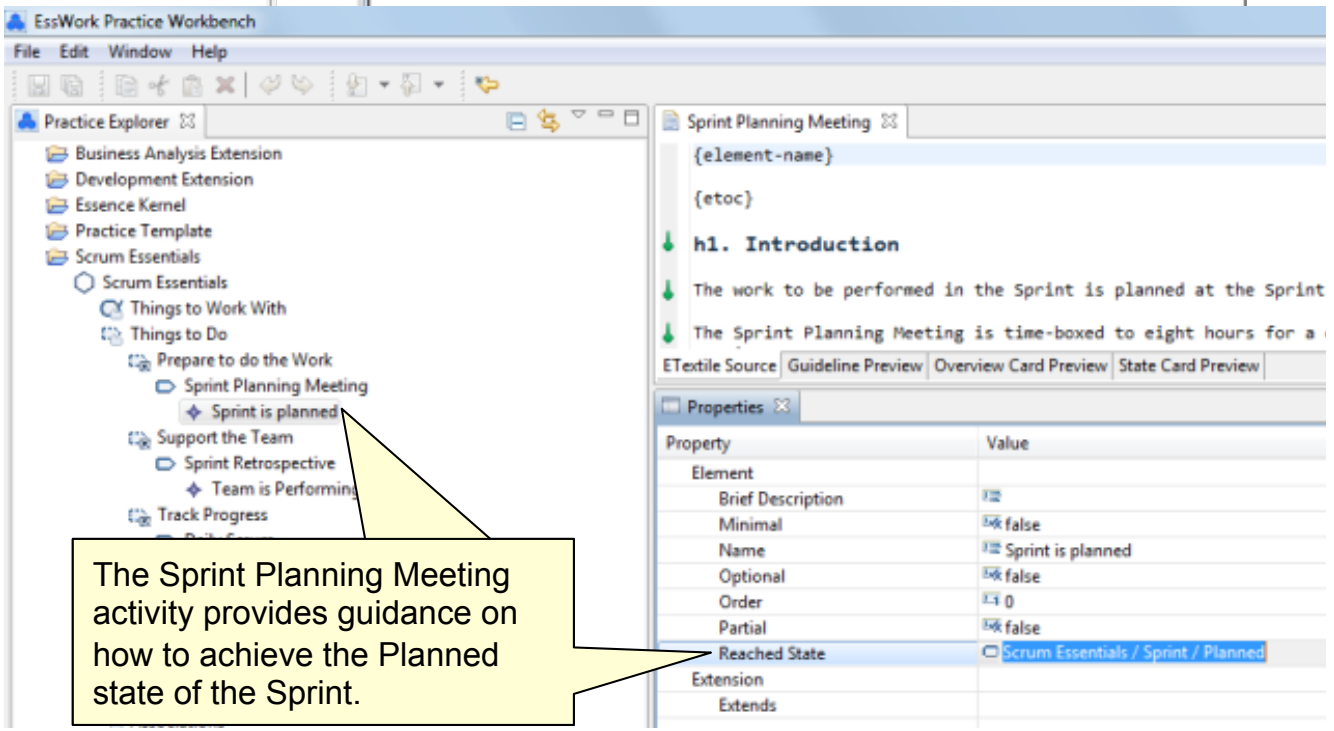
Scrum Activities



The Scrum events (except the Sprint which is represented as an Alpha) are represented as Activities



Sprint Planning Meeting (Card Preview)



The Sprint Planning Meeting activity provides guidance on how to achieve the Planned state of the Sprint.

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- OMG Essence specification
  - OMG, "Essence – Kernel and Language for Software Engineering Methods", OMG Document ad/2013-02-01, 18 February 2013.
  - http://semat.org/wp-content/uploads/2013/02/Essence_final_submission_18Feb13.pdf
- Scrum Guide
  - Ken Schwaber and Jeff Sutherland, "Scrum Guide", October 2011.
  - http://www.scrum.org/Portals/0/Documents/Scrum%20Guides/Scrum_Guide.pdf
- Practice authoring tool
  - EssWork Practice Workbench
  - http://www.ivarjacobson.com/EssWork_Practice_Workbench/

Questions

- Email:
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- OMG website:
  - http://www.omg.org
- SEMAT website:
  - http://www.semat.org