Collaboration pattern

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Motivation

- Rapid adoption of new methods of working with supporting toolsets
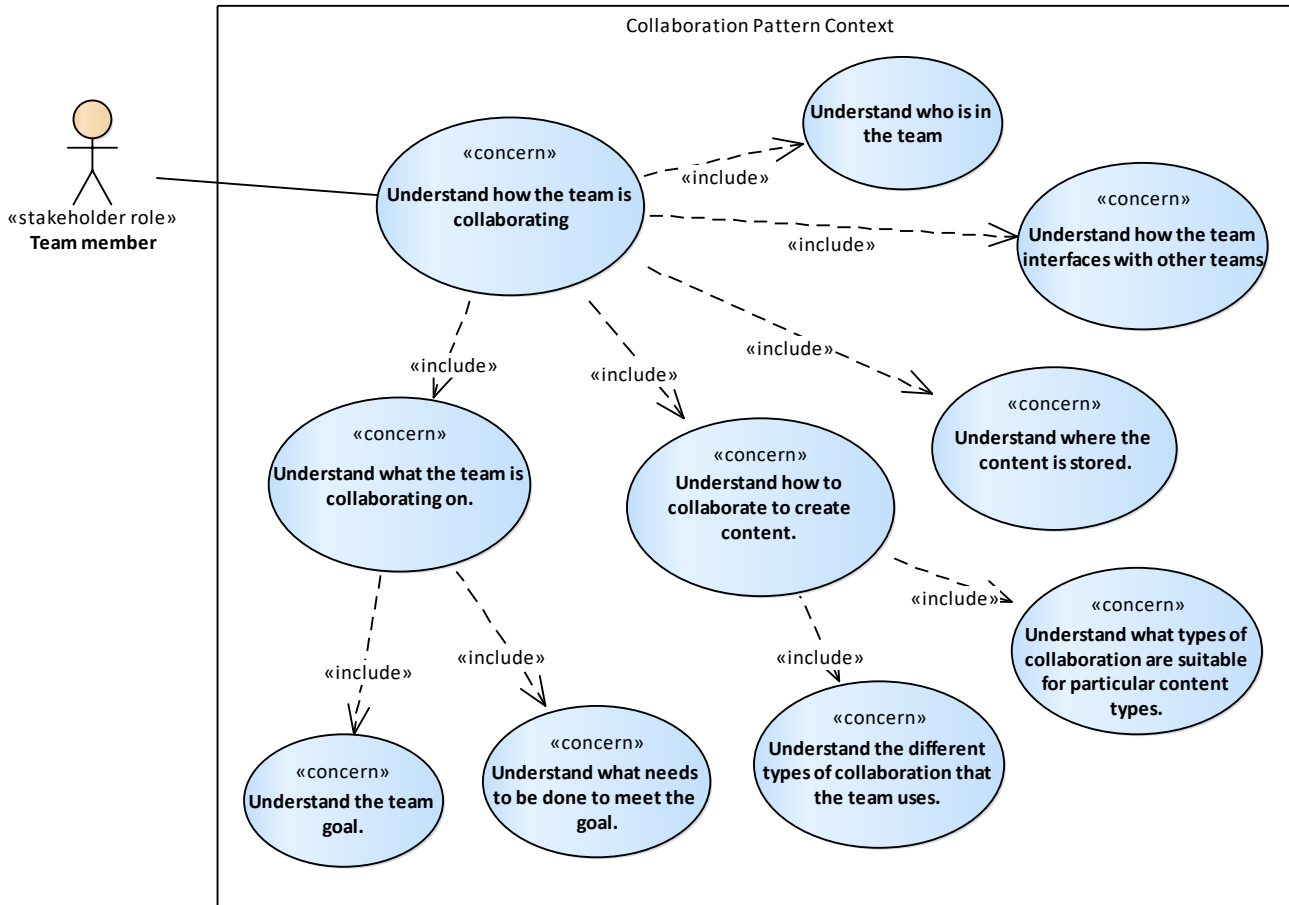
- More communication methods than ever before

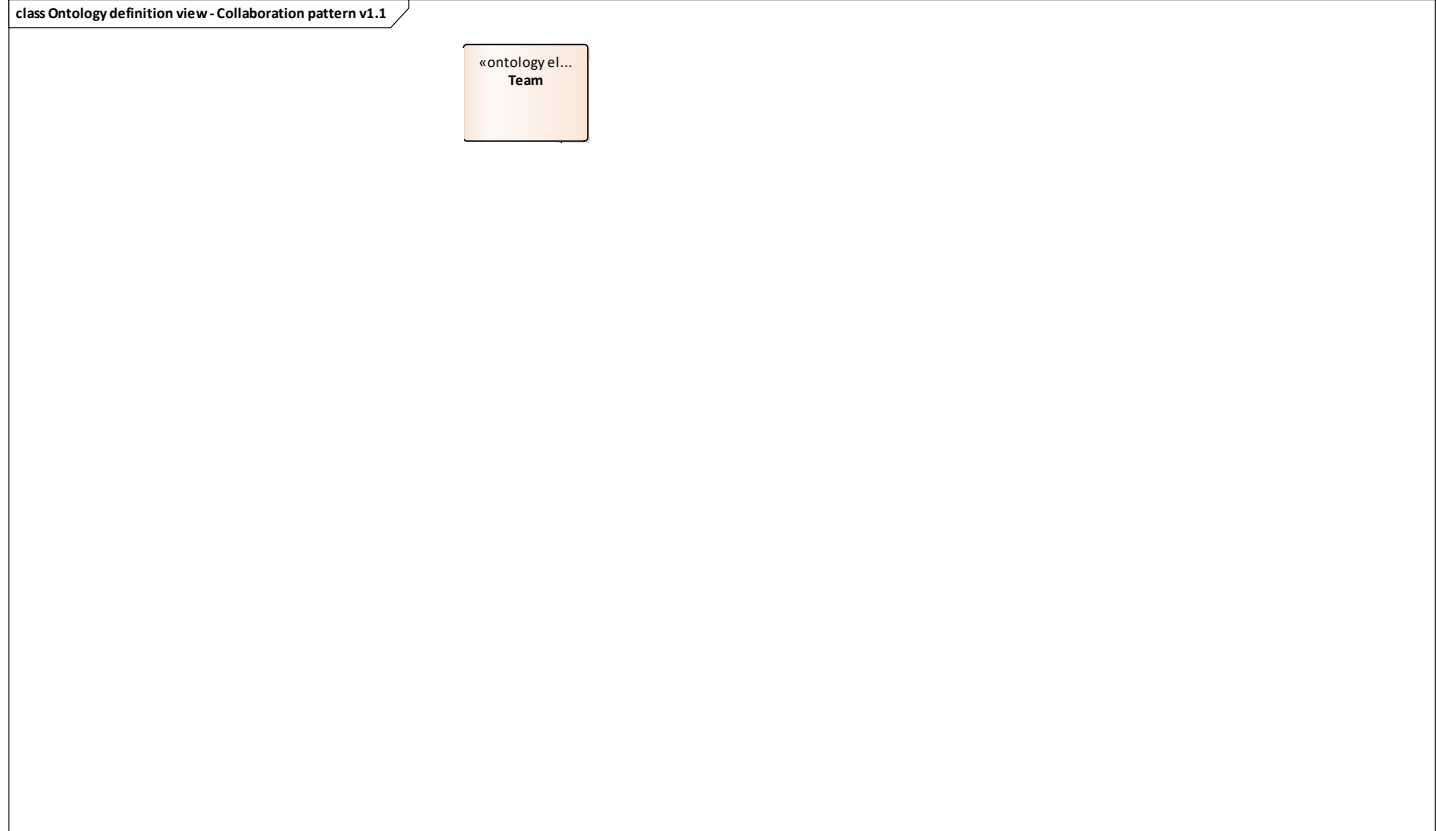- More places where information can be stored

Aims

Collaboration Pattern Context

«stakeholder role»
Team member

«concern»
Understand how the team is collaborating

«include»

«concern»
Understand who is in the team

«include»

«concern»
Understand how the team interfaces with other teams

«include»

«include»

«include»

«concern»
Understand what the team is collaborating on.

«concern»
Understand how to collaborate to create content.

«concern»
Understand where the content is stored.

«include»

«concern»
Understand what types of collaboration are suitable for particular content types.

«include»

«include»

«include»

«concern»
Understand the team goal.

«concern»
Understand what needs to be done to meet the goal.

«concern»
Understand the different types of collaboration that the team uses.

- Who is collaborating?

- What is the purpose?

- What do we create?

- How do we create it?
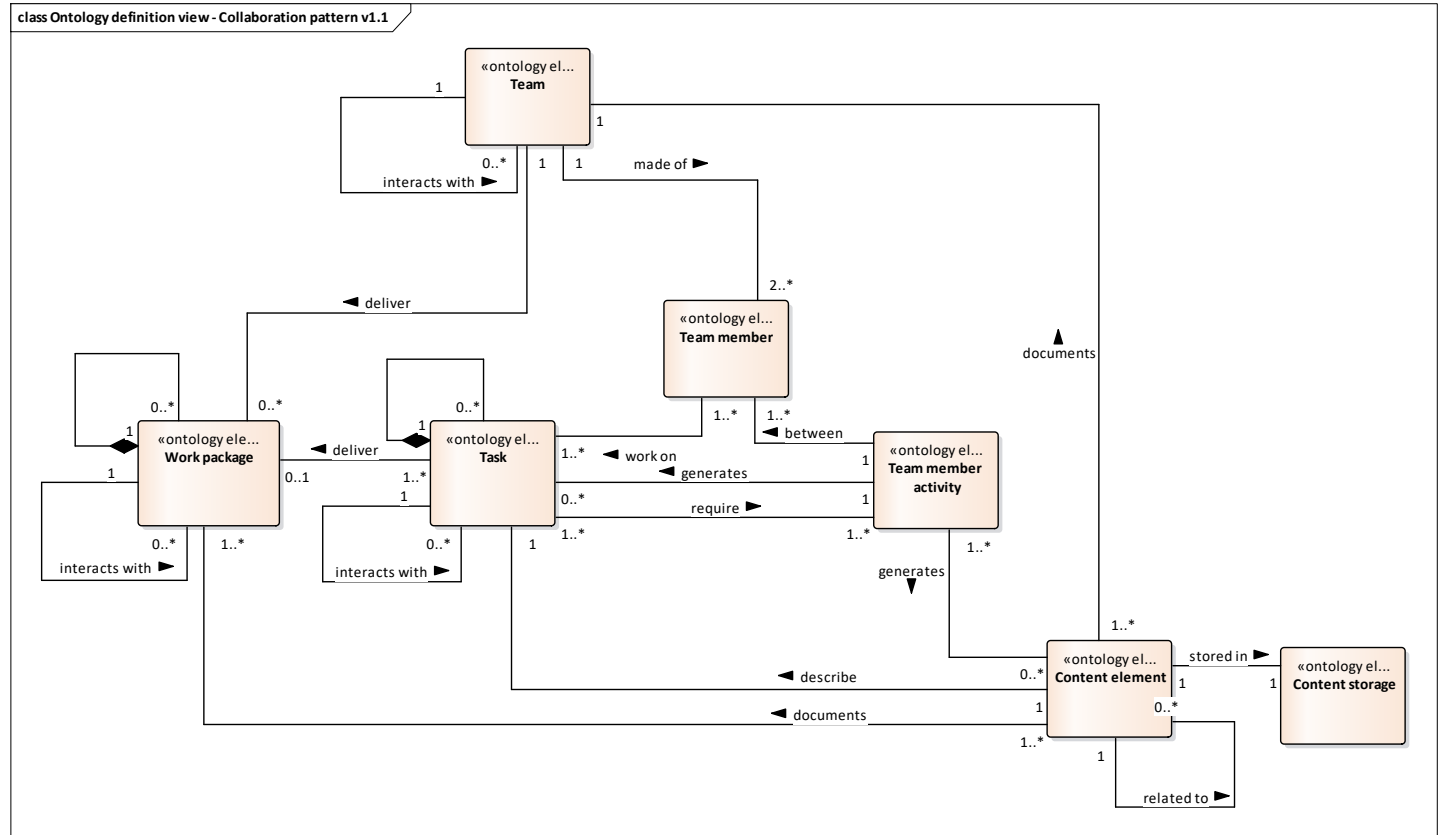
- Where is it stored?

- Who do we interact with?

Concepts

- Team
- Team member
- Team member activity
- Content element
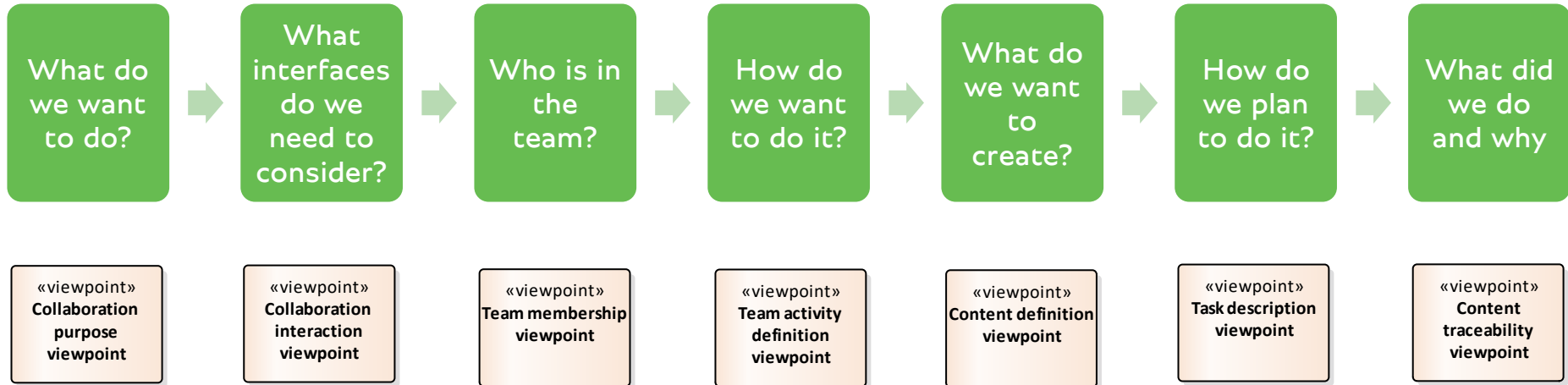- Content storage
- Work package
- Tasks

class Ontology definition view - Collaboration pattern v1.1

«ontology el...
Team

Concepts

- Team
- Team member
- Team member activity
- Content element
- Content storage
- Work package
- Tasks

Approach

What do we want to do?	→	What interfaces do we need to consider?	→	Who is in the team?	→	How do we want to do it?	→	What do we want to create?	→	How do we plan to do it?	→	What did we do and why

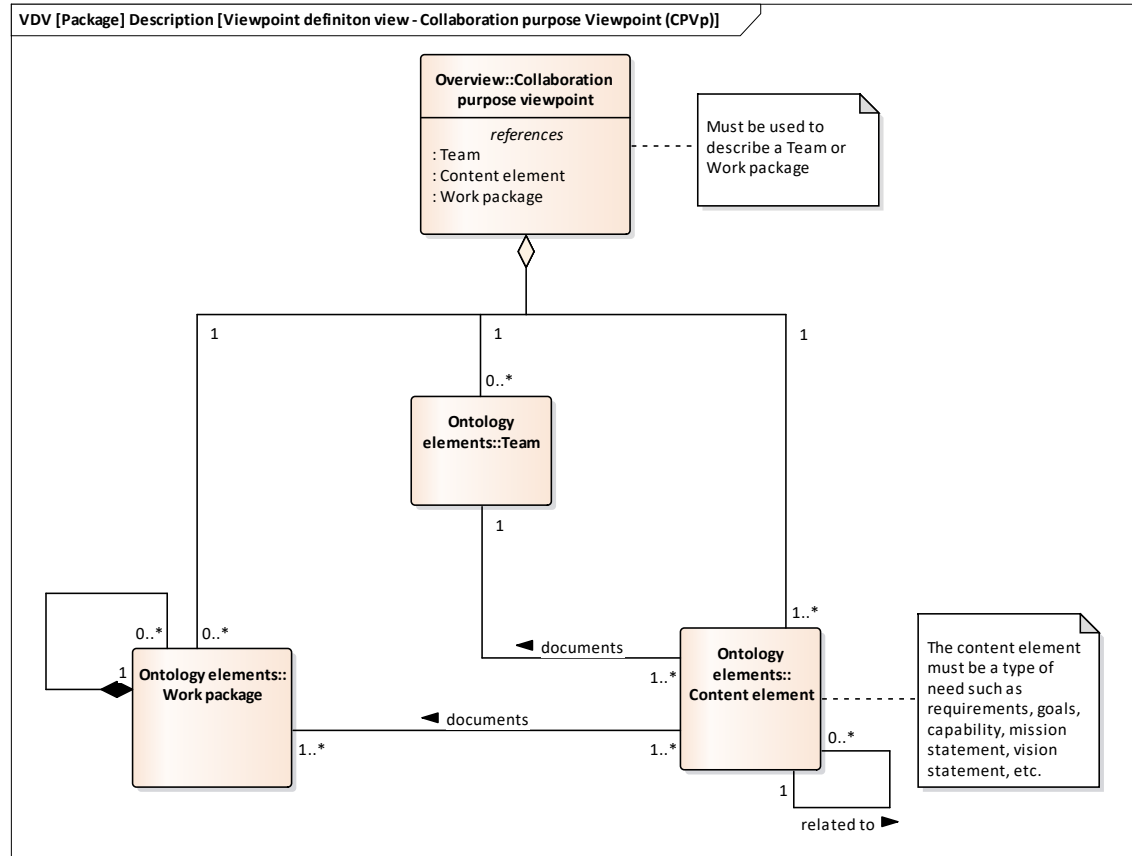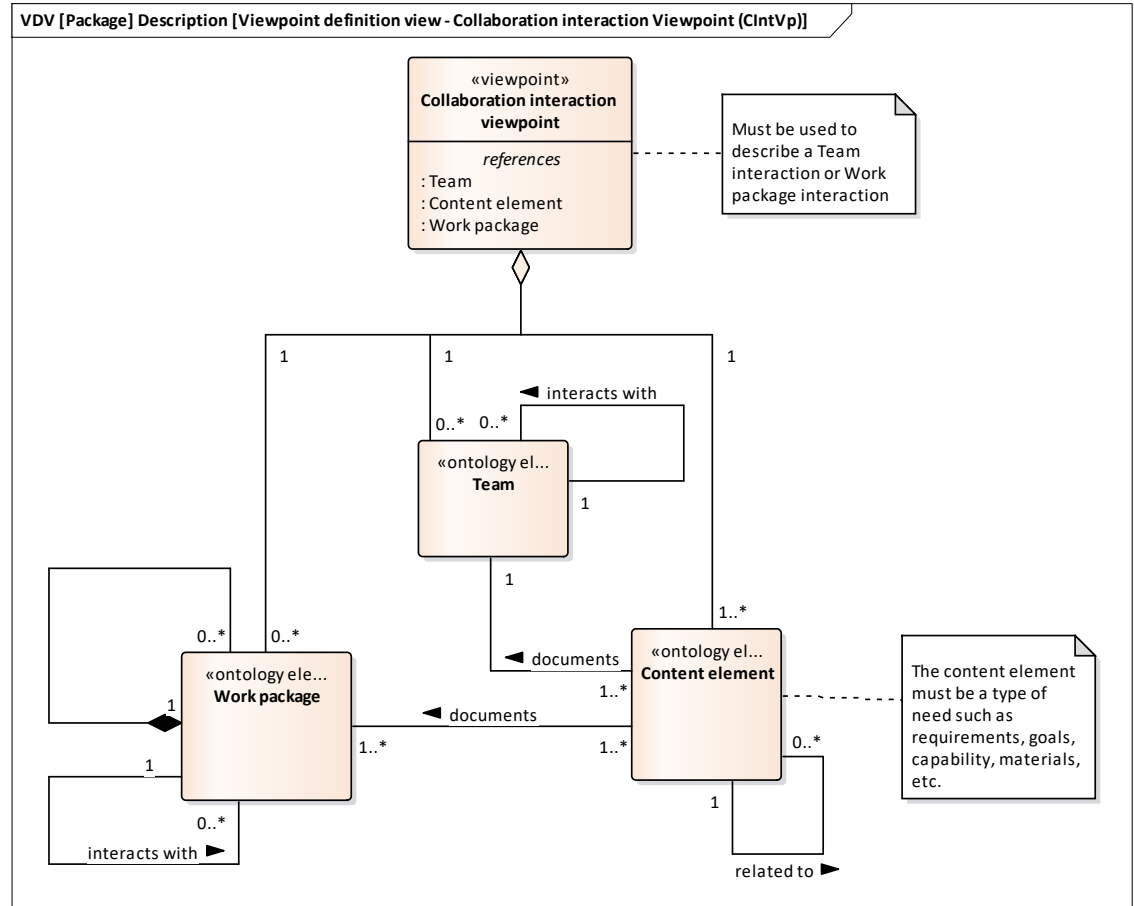| «viewpoint» **Collaboration purpose viewpoint** | | «viewpoint» **Collaboration interaction viewpoint** | | «viewpoint» **Team membership viewpoint** | | «viewpoint» **Team activity definition viewpoint** | | «viewpoint» **Content definition viewpoint** | | «viewpoint» **Task description viewpoint** | | «viewpoint» **Content traceability viewpoint** |

Collaboration purpose

- Why does the team exist?
  - Mission statement
  - Vision statement
  - Requirements
- What is the team doing to satisfy its existence?
  - Goals
  - Requirements
- What is the structure of the work packages

VDV [Package] Description [Viewpoint definiton view - Collaboration purpose Viewpoint (CPVp)]

Overview::Collaboration purpose viewpoint
references
: Team
: Content element
: Work package

Must be used to describe a Team or Work package

Ontology elements::Team

Ontology elements:: Work package

Ontology elements:: Content element

documents

documents

related to

The content element must be a type of need such as requirements, goals, capability, mission statement, vision statement, etc.
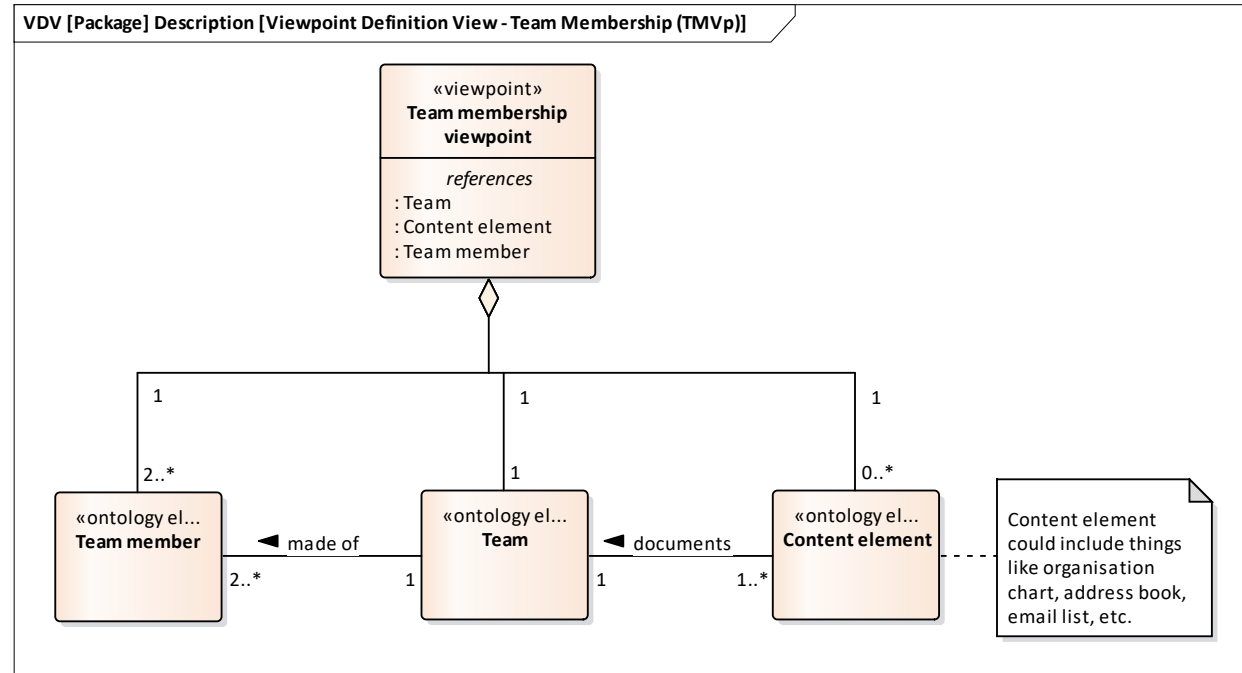
Collaboration interaction

- Interaction between teams
  - Requirements
  - Materials
  - Information
- Interactions between work packages
  - Requirements
  - Materials

VDV [Package] Description [Viewpoint definition view - Collaboration interaction Viewpoint (CIntVp)]

«viewpoint»
Collaboration interaction viewpoint

references
: Team
: Content element
: Work package

Must be used to describe a Team interaction or Work package interaction

1   1   1

interacts with

0..* 0..*

«ontology el...»
Team

1

1

documents

«ontology ele...»
Work package

0..* 0..*

1

documents 1..*

1..*

«ontology el...»
Content element

1..*

1..*

0..*

The content element must be a type of need such as requirements, goals, capability, materials, etc.

1
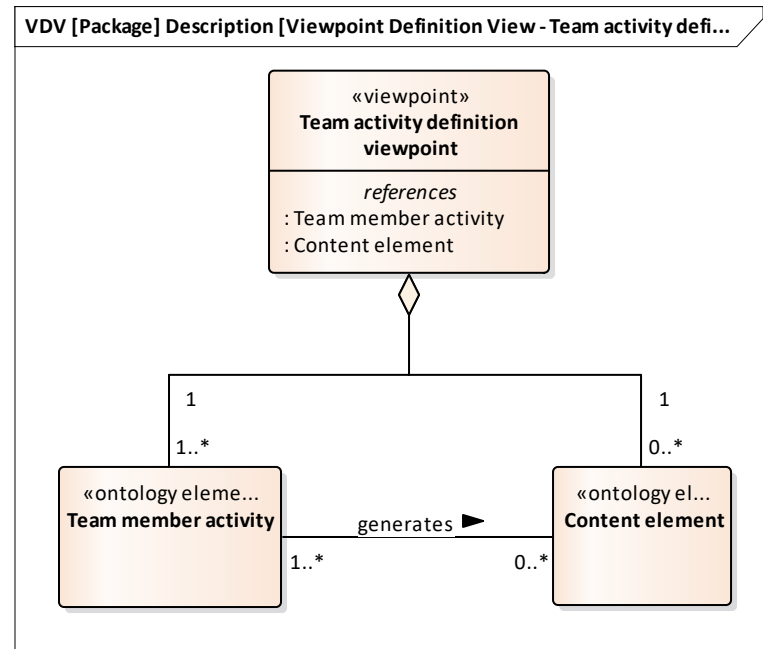
1

0..*

interacts with ▶

related to ▶

Team membership

- Who is in the team?

- What documentation do you have to describe the team members?
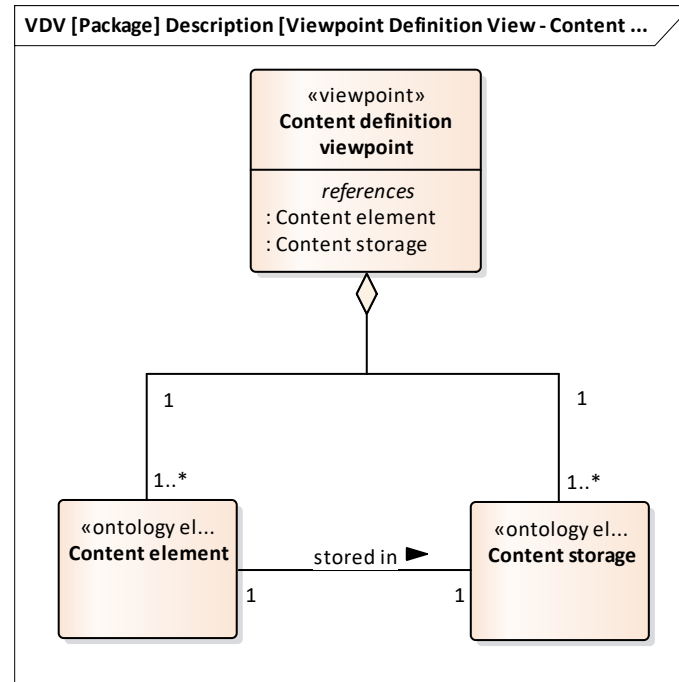 - Organisation charts
  - Address books
  - Contact lists

VDV [Package] Description [Viewpoint Definition View - Team Membership (TMVp)]

«viewpoint»
Team membership viewpoint

references
: Team
: Content element
: Team member

«ontology el...
Team member

«ontology el...
Team

«ontology el...
Content element

1

2..*

1

1

1

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2..* — made of — 1

1 — documents — 1..*

Content element could include things like organisation chart, address book, email list, etc.

Team activity definition

- **What kind of activity does the team do?**
  - Meetings
  - Discussions
  - Workshops
- **Could be structured as:**
  - Formal collaboration
  - Informal collaboration
  - Individual

- **What type of content can be created by each activity**
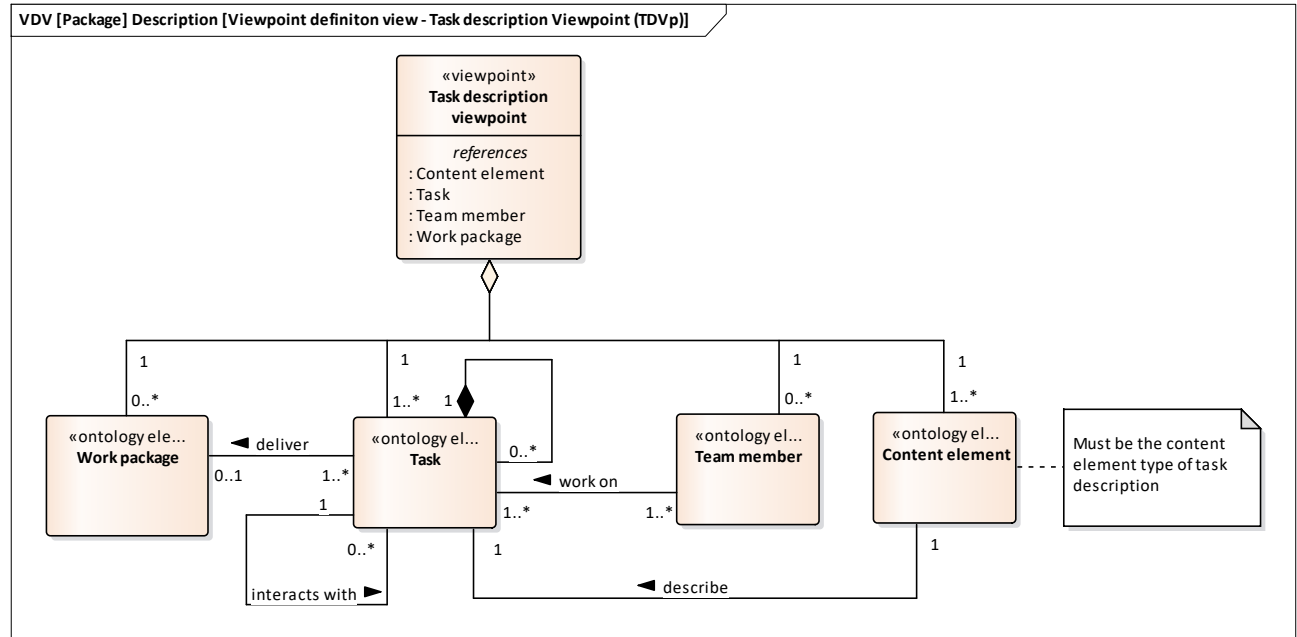 - Meeting minutes
  - Notes
  - User journeys

VDV [Package] Description [Viewpoint Definition View - Team activity defi...

«viewpoint»
Team activity definition viewpoint

references
: Team member activity
: Content element

1

1..*

«ontology eleme...
Team member activity

generates ►

1..*

1

0..*

«ontology el...
Content element

0..*

Content definition

- **What are the different types of content.**
  - Decisions
  - Requirements
  - Discussions
  - Ideas
  - Questions
  - Research
  - Songs
- **Where is the content stored**
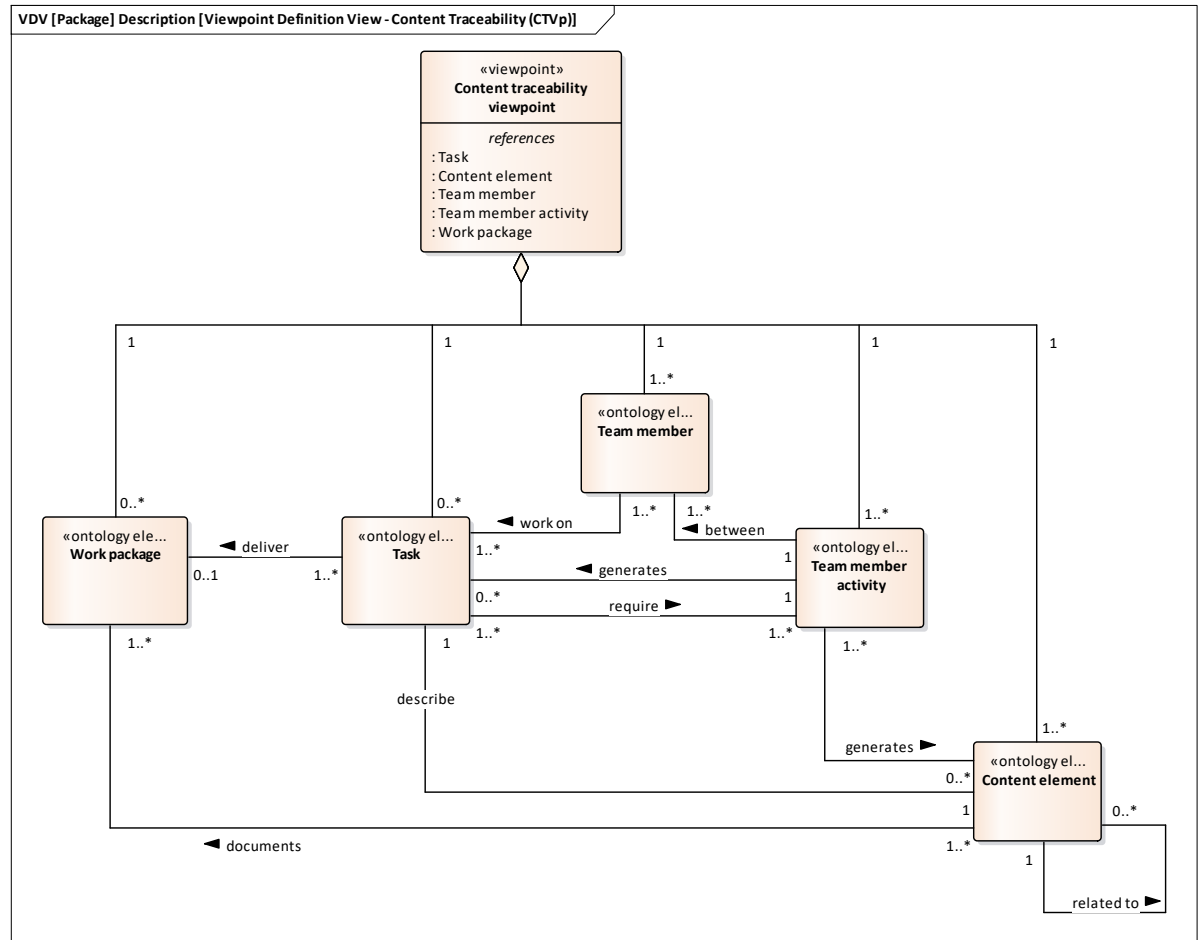 - Database
  - OneNote
  - Model
  - Cupboard

Task description viewpoint

- What are the tasks?

- Who is working on them?

- How are they structured?

- What are their dependencies?

- Which work packages do they deliver?

- Basically Trello, MS Planner, etc.

Content traceability

- What was done?

- How was it done?

- Who did it?

- Why did we do it?

VDV [Package] Description [Viewpoint Definition View - Content Traceability (CTVp)]

«viewpoint»
Content traceability viewpoint

references
: Task
: Content element
: Team member
: Team member activity
: Work package

«ontology ele...
Work package

«ontology el...
Task

«ontology el...
Team member

«ontology el...
Team member activity

«ontology el...
Content element

deliver · work on · between · generates · require · describe · generates · documents · related to

Conclusion and next steps

Summary

- Presented a MBSE pattern to address complexities of modern collaboration.
- The pattern allows for specific content and activity definition.
- The viewpoints describe the team and its interactions/ activities as well as providing team transparency.
- This approach could be used with MBSE but also for general work.

Next steps

- Completion of the pattern documentation including non-MBSE version and examples.
- Request for peer review.
- Publish a pattern through the MBSE working group.

Any Questions?

Thank you for your time

Thank you to the following for your feedback and support:
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Simon Perry (Scarecrow)