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# The Challenges of Deploying MBSE Solutions

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## Objective

Synthesize the key factors accelerating / hindering the deployment of MBSE solutions in a variety of domains, organizations and countries

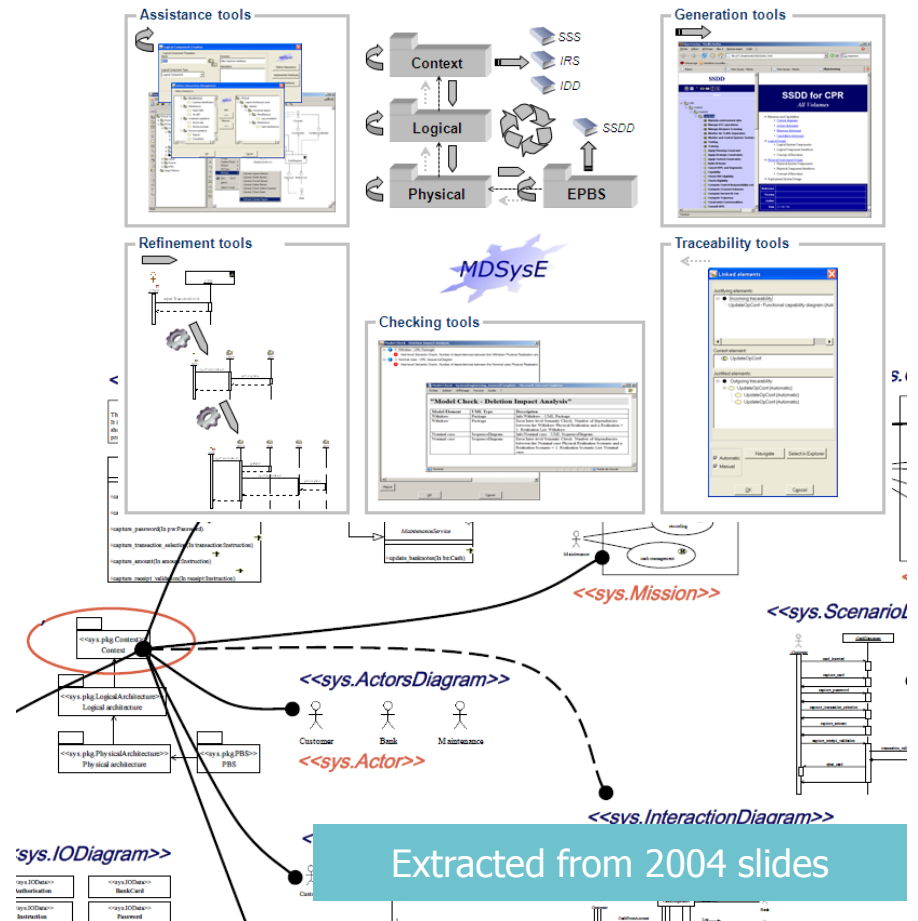
## How

- Present Thales experience: 10 years large-scale MBSE rollout
- Collect lessons learned from attendees on the use of MBSE in their organization:
  - Enablers
  - Obstacles

- Thales MBSE deployment experience – 20 min
- Lessons learned from participants – 45 min
  - 5 groups of 7 persons
  - 1 template
- Restitution: 45 min
  - 8 minutes per group
  - Consolidation + Merge with internal Thales survey

## 4 main phases





- **2003-2006 + 2006-2007**
  - Advanced UML Profiling



## 4 main phases

- **2008**
  - Arcadia method specification
  - The DSL Choice

## Graphical DSML or UML/SysML Profile?

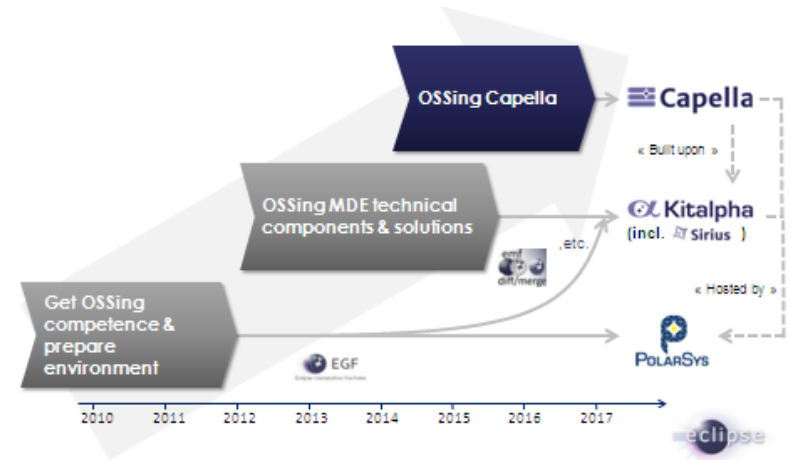
<b>Graphical DSML</b>  <ul style="list-style-type: none"> <li>■ Tight fit with exact domain and needs</li> <li>■ Short learning curve thanks to familiar terms and concepts</li> <li>■ Complete freedom in expressivity (language and representations)</li> </ul>	<b>Profiling UML/SysML</b>  <ul style="list-style-type: none"> <li>■ Usually well-accepted in Thales by Software engineers, less by System engineers</li> <li>■ Language complexity</li> <li>■ Limited capabilities regarding diagram customizations</li> <li>■ Restraining the usage of a UML tool to selected scope of concepts is difficult</li> </ul>
<b>Graphical DSML</b>  <ul style="list-style-type: none"> <li>■ Cost ... until Sirius!</li> </ul>	<b>Profiling UML/SysML</b>  <ul style="list-style-type: none"> <li>■ Easier interoperability with standards</li> <li>■ Widely understood (or misunderstood)</li> </ul>

## 4 main phases

- **2008-2011**
  - Capella & Sirius development
  - Evangelization
  - Pilot projects
- **2011-2014**
  - Deployment acceleration
  - Collaborative modelling



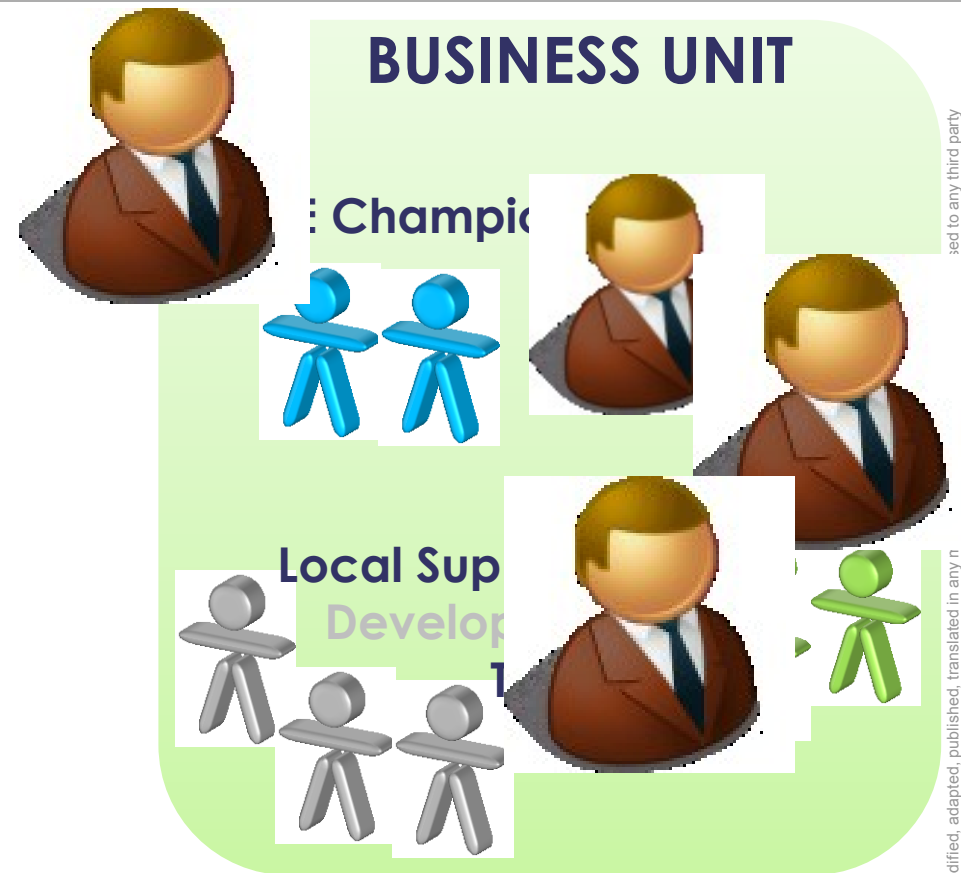
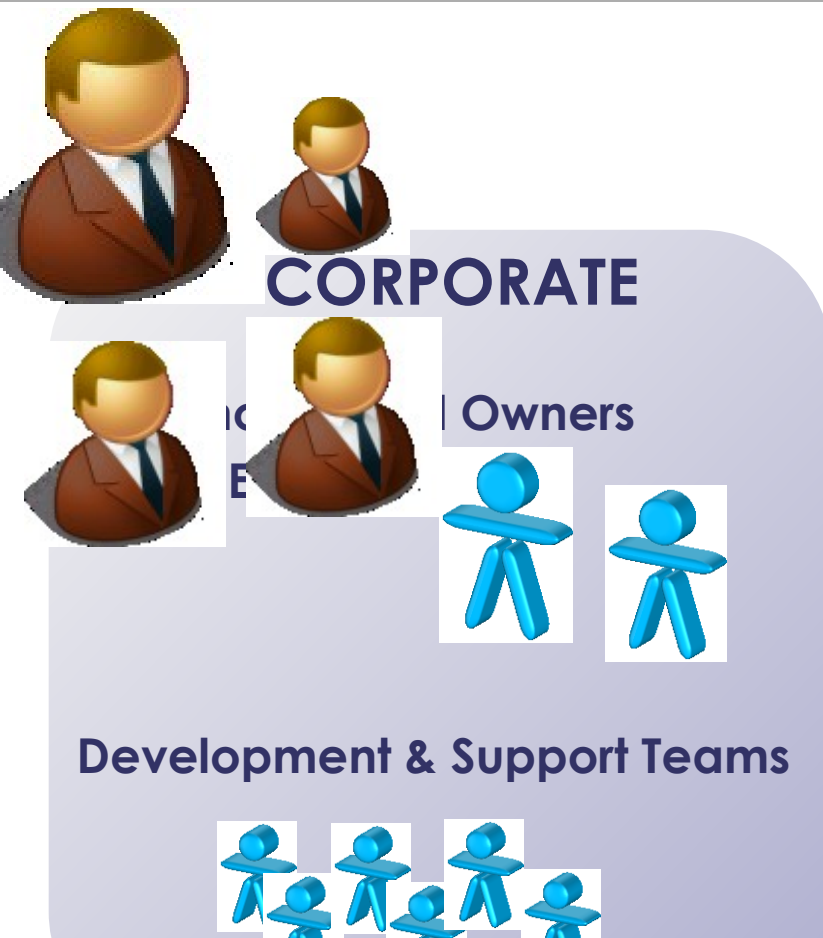
## 4 main phases



- **2014-**
  - Open sourcing

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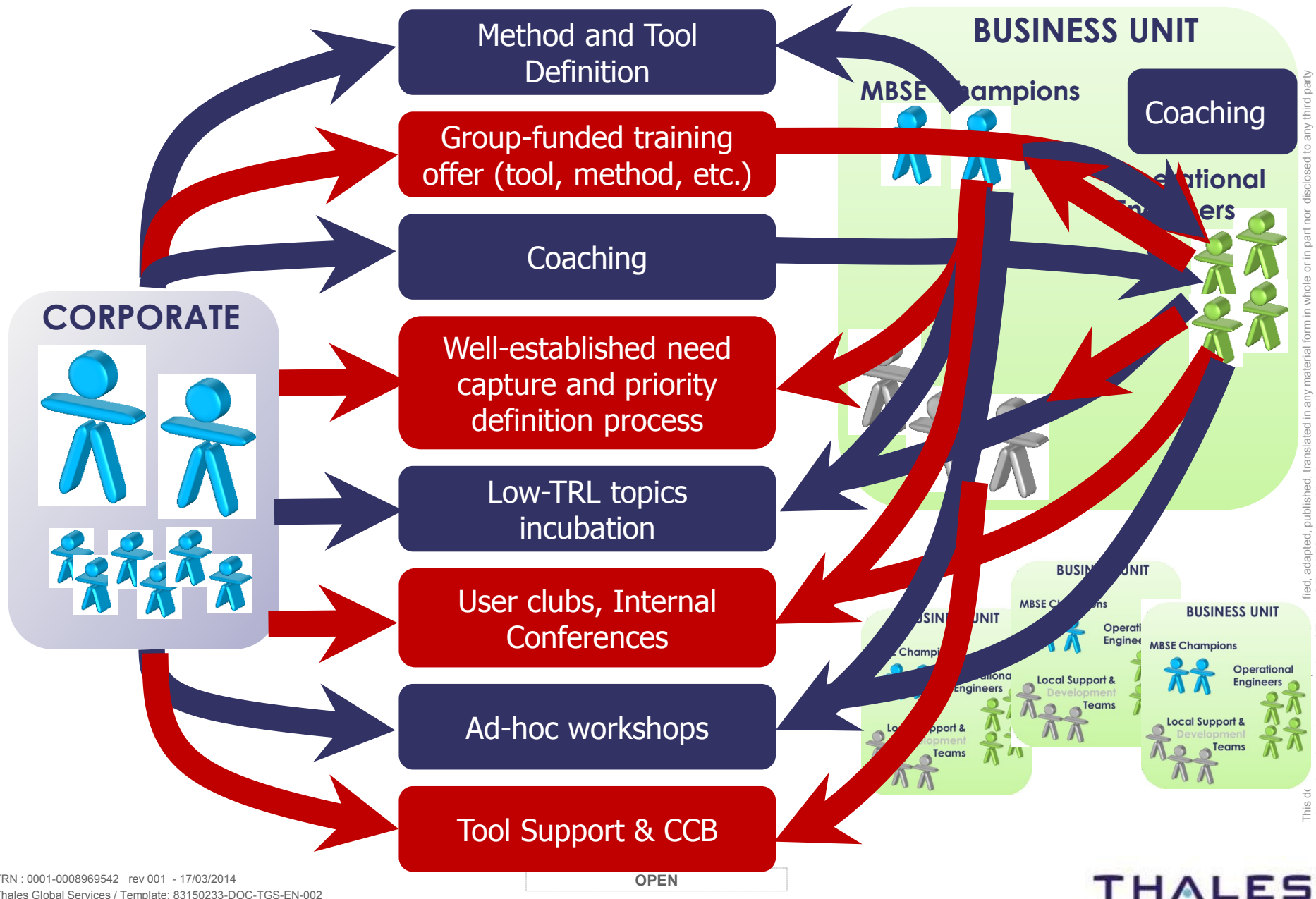
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## Issues

- Don't know how and where to start
- Need definite guidelines and goals
- Need help to approach the tool and method
- Expect pairs feedback

## Coaching benefits

- Simplified the modelling activity
- Allowed for a consistent model
- Helped mastering the tool to reach the goals quicker



## Missions

- Define the objectives and rules (wiki)
- Monitor the evolution of the model
- Provide coaching
- Communicate with stakeholders
- Define the Tool environment to support the activity
- Request specific work from the corporate and BU teams (doc gen, tool add-ons)
- Evangelize
- Make the model become the reference of the Systems Engineering work
- Give new ideas and raise issues to Corporate
- Manage Tool roadmap
- Manage Model version configuration
- Coordinate interactions with other models



## 3 Factors helping the deployment of MBSE

Classification	Weight	Factor	Comments

**Optional  
keywords**

**Focus on deployment topics!  
(i.e. not on MBSE lacks or added-value)**