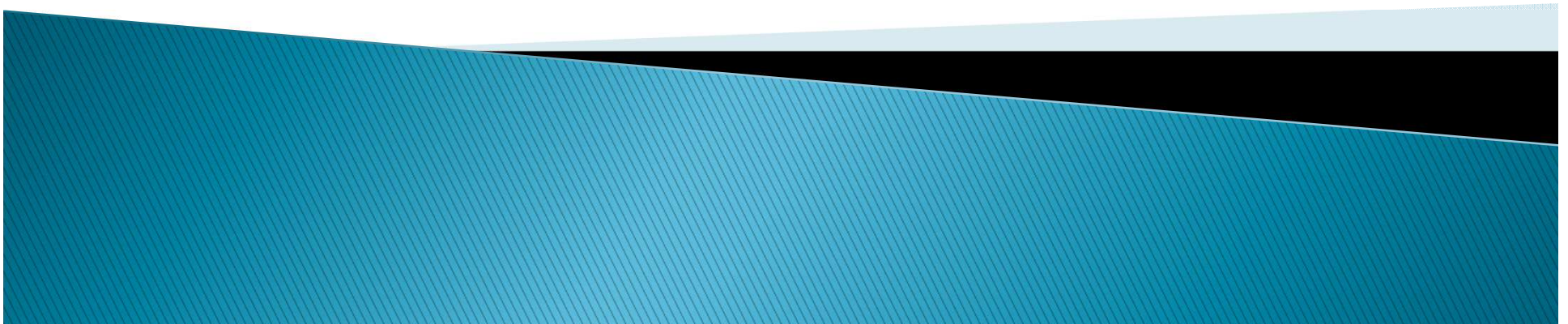


Advances in Care Management Automation

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Agile Enterprise Design



Purpose

This presentation is about a new modeling language that will transform care management

It is based on the Case Management Model and Notation (CMMN) specification proposed by the following organizations:

Agile Enterprise Design
Commitment
Computas
Cordys
SINTEF

Sword-Ciboodle
Tibco Software
Unisys
Visumpoint

Care Management Is Knowledge Work

- ▶ The procedures and activities required for an individual patient are unpredictable
- ▶ Care requires expert planning, collaboration, decisions and professional judgment
- ▶ Treatment options, best practices and restrictions change over time.
- ▶ Work must be supported by well-defined and responsive services

What Has Changed?

- ▶ Everybody is connected through the Internet
- ▶ Expectations associated with use of Health IT (e.g., “Meaningful use”) are very high
- ▶ Patient records are (or soon will be) electronically captured, exchanged and accessed
- ▶ The costs of computing, communications and data storage are negligible
- ▶ Demand to reduce the cost of health care is heightened

How Can Automation Help?

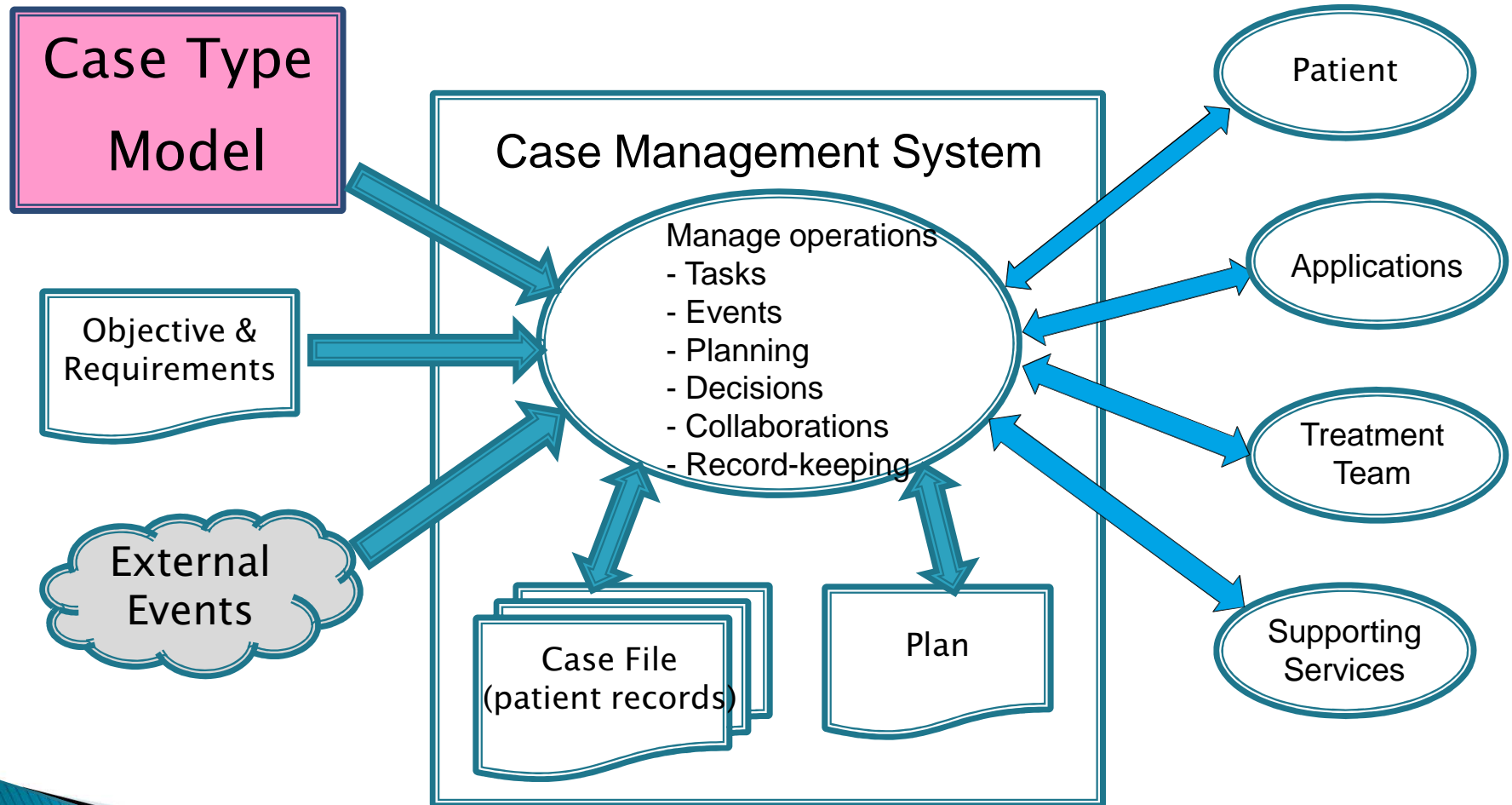
- ▶ Participants can have rapid access to current and historical information, anytime, anywhere
- ▶ Policies and best practices can guide decisions
- ▶ Participants can be alerted to relevant changes in circumstances
- ▶ Alarms can be raised if actions are not timely
- ▶ Records can be immediately updated for analysis, collaboration, accountability and guidance
- ▶ Provide consistency, repeatability, and ultimately quality in support of care management

Case Management: A New Automation Paradigm

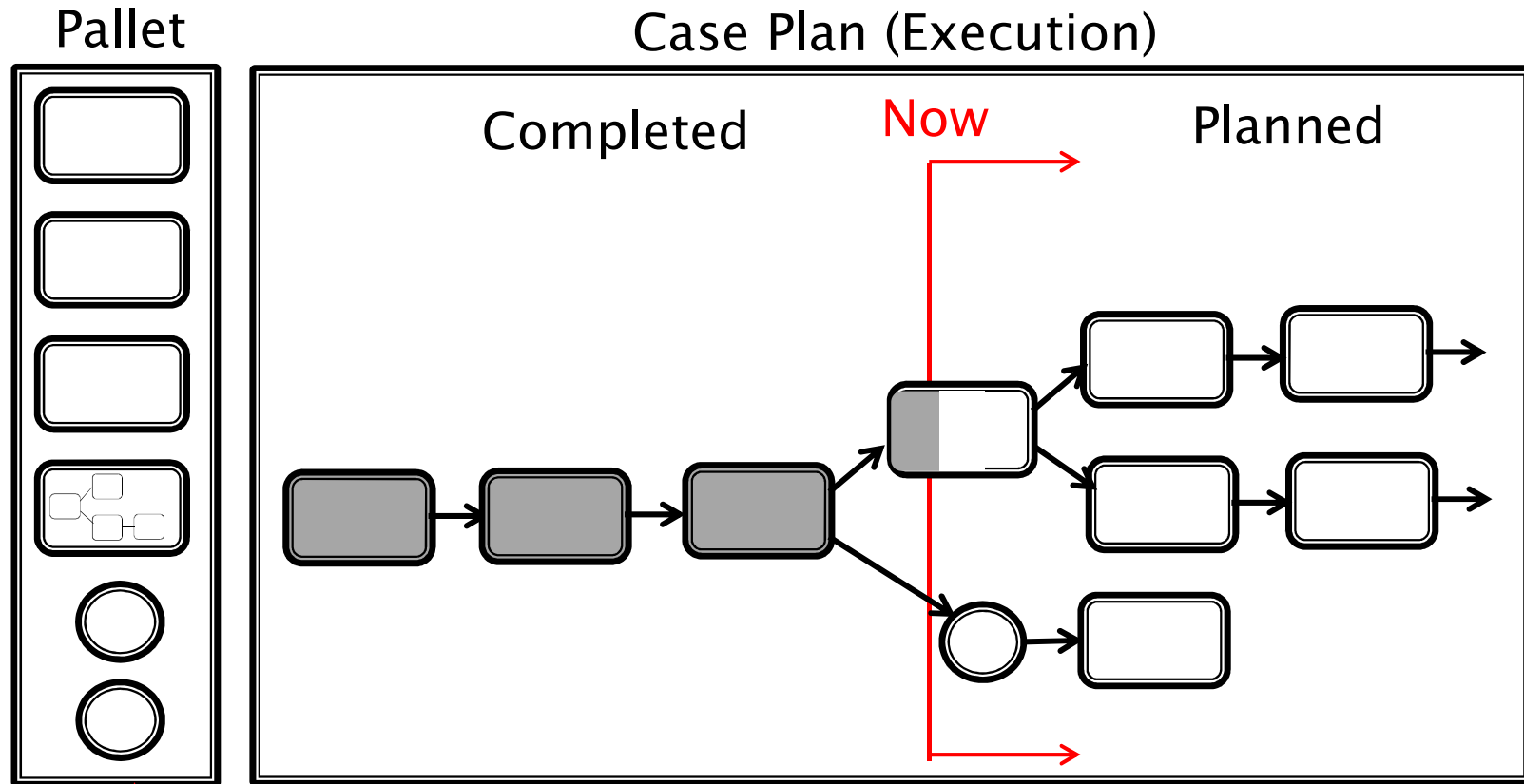
- ▶ A case management modeling language is under development at the Object Management Group*
- ▶ A model will define treatment planning elements and guidance for improved care management
- ▶ Case management modeling will change the way we think about automation, collaboration and knowledge work.

* The Object Management Group is a not-for-profit standards body founded in 1989

Care Management Automation



Interactive Care Planning



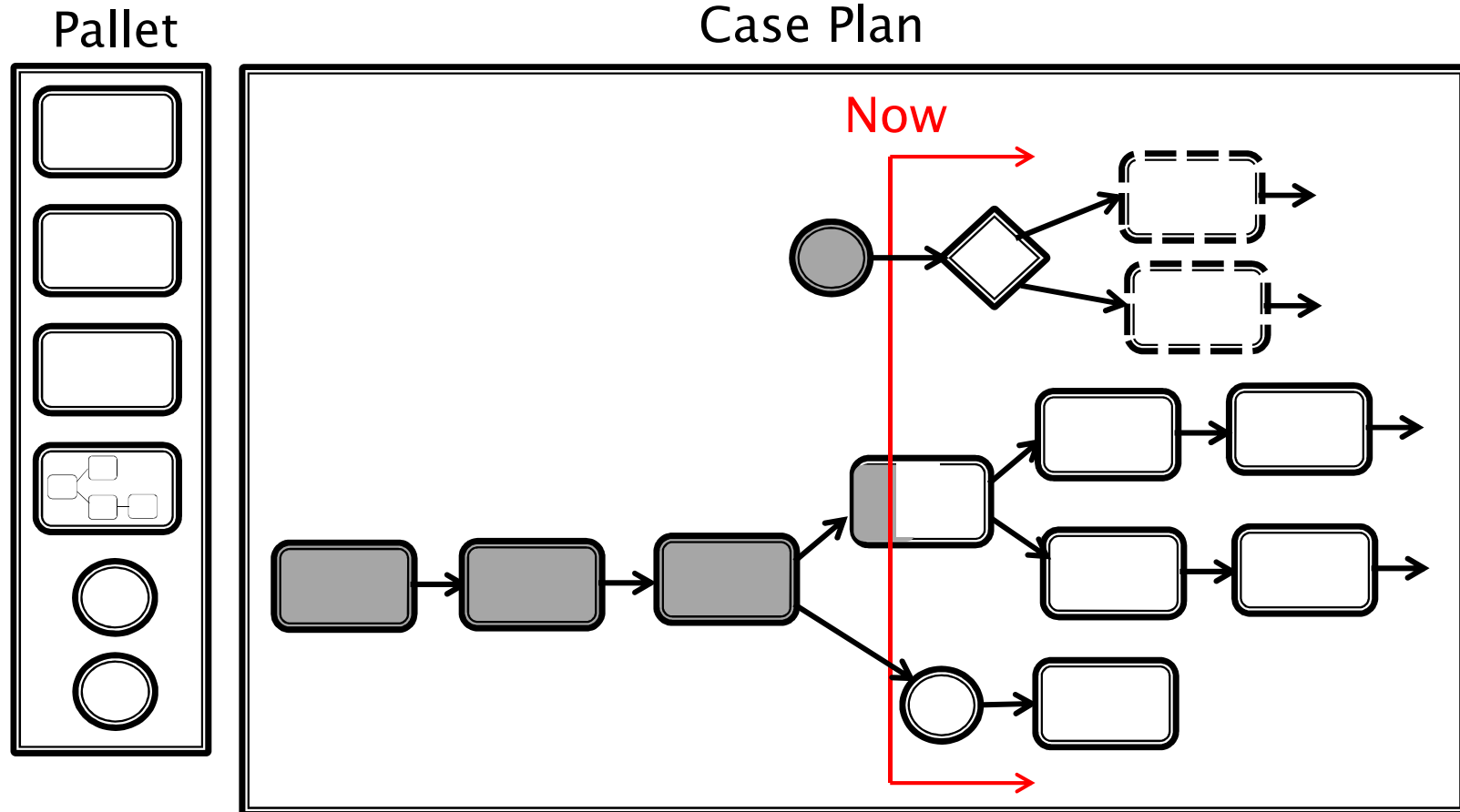
Planable Elements

Graphics for illustration only

Typical Plan Elements

- ▶ Tasks
 - Participant activity
 - Collaboration
 - Engage a service
 - Perform a computation
- ▶ Events
 - External events
 - Change in the case
 - Time expired
- ▶ Decisions
 - Plan alternatives
 - Authorizations
- ▶ Plan fragments

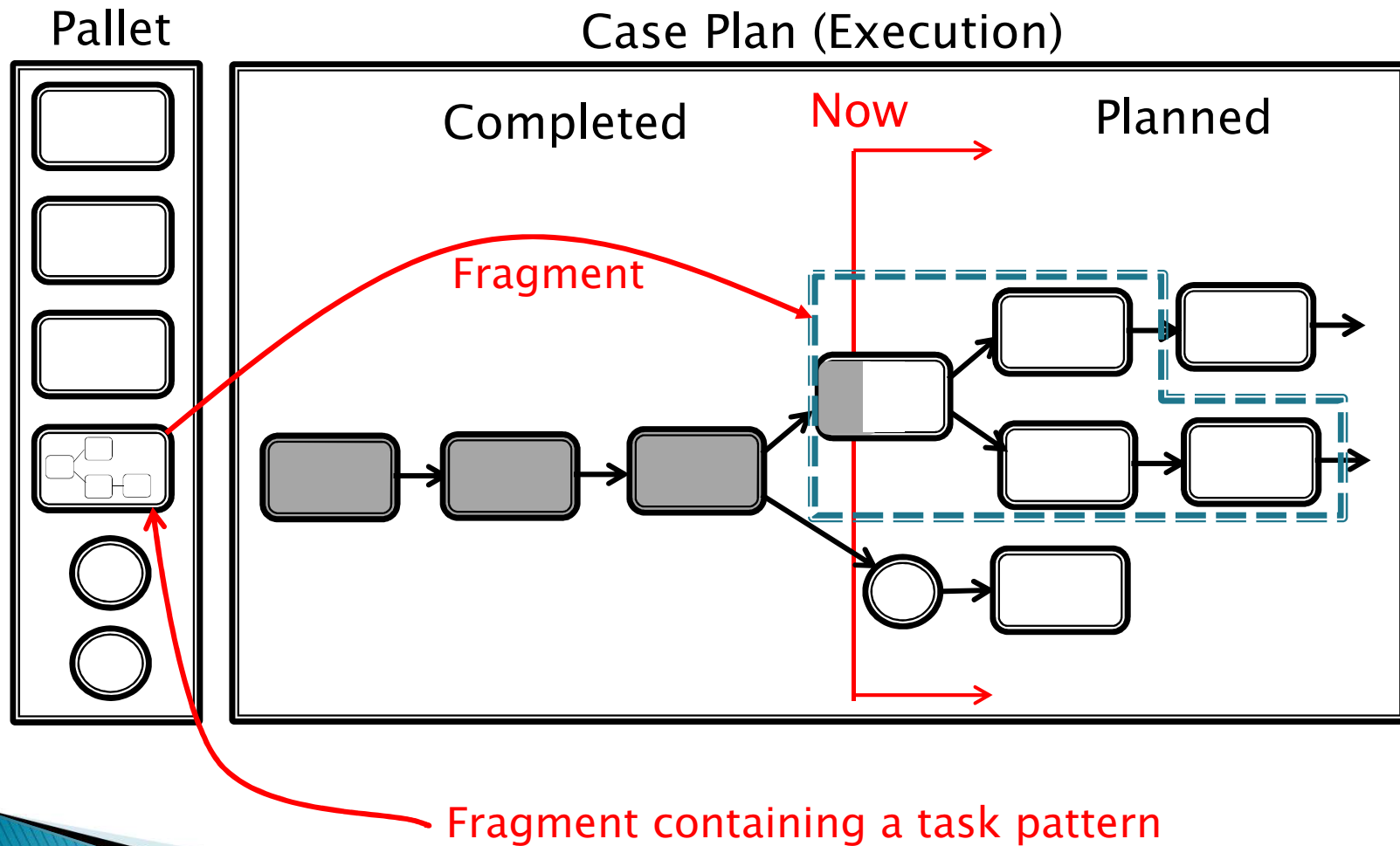
Planned Alternatives



Alerts Prompt Action

- ▶ Patient monitoring event
- ▶ Activity overdue
- ▶ Test results available
- ▶ Collaboration activity initiation

Reusable Plan Fragment



Context for Extended Capabilities

- ▶ Specific actions or decisions
- ▶ Access to patient-specific details
- ▶ Timely information and analysis
- ▶ Support for collaboration/consultation

Example 1: Script Analysis

In the context of the patient's health record

- ▶ Contraindications and precautions
- ▶ Medication interactions
- ▶ Side effects and adverse reactions
- ▶ Allergies
- ▶ Prior authorization

Example 2: Decision Support

- ▶ Considering
 - Health record facts
 - Participant observations
- ▶ Identify alternatives
 - Modeled alternatives
 - Filtered alternatives
 - Rule-generated alternatives
- ▶ Identify costs and risks

Business Value

- ▶ Make better informed decisions
- ▶ Improve collaboration and timeliness of actions
- ▶ Improve record keeping & accountability
- ▶ Reduce errors and oversights
- ▶ Ensure policy compliance
- ▶ Provide guidance and reusable patterns
- ▶ Evolve best practices
- ▶ Leverage participant creativity and empower teams

Status

- ▶ Some existing products have limited capabilities
- ▶ Three initial submissions to OMG RFP
- ▶ Reconciliation of submissions under study
- ▶ Revised submission(s) in November
- ▶ Potential implementations in 2012

Key Issues

- ▶ Runtime planning
- ▶ Plan fragments
- ▶ Role and context specific pallet
- ▶ BPMN extension/integration

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