

Bridging SOA Editors in Eclipse STP with the Intermediate Model

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INSTITUT NATIONAL
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Presentation Overview

Introduction

The need for the STP-Intermediate Model

How the STP-IM Addresses the SOA Diversity

Virtual Use Case for STP-IM

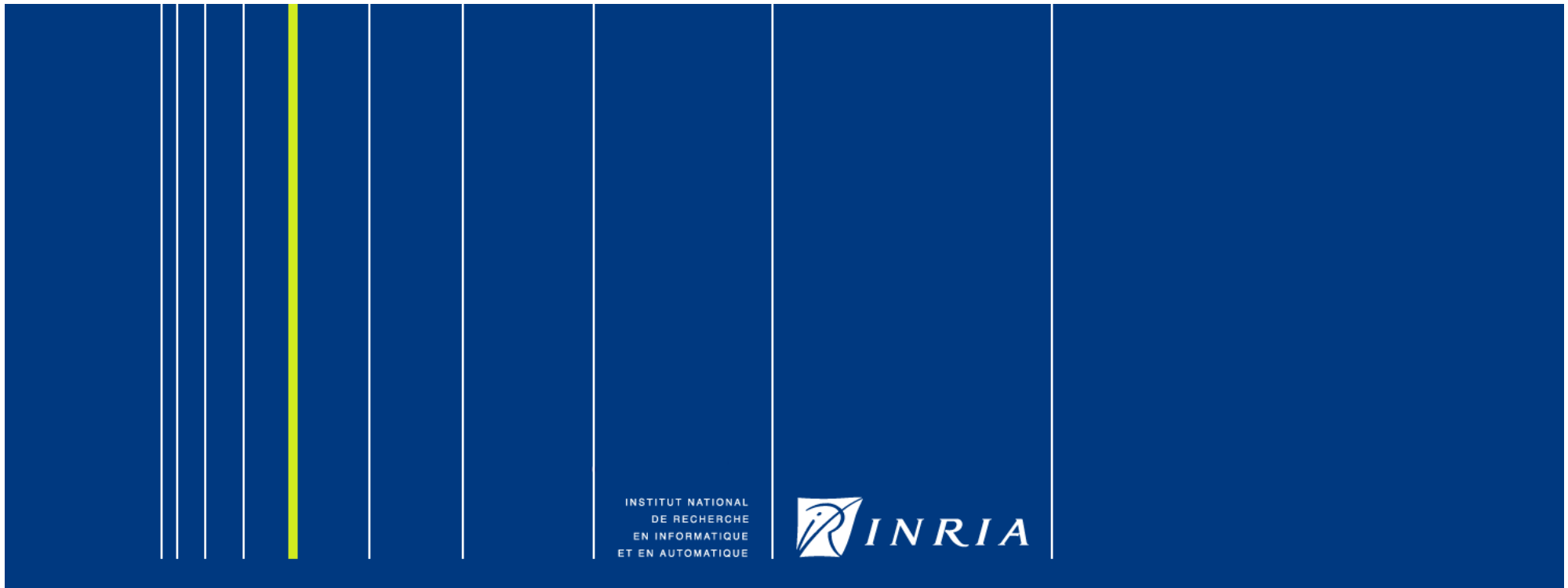
DEMO

Current Status and Future Work

How to Get and Contribute to STP-IM



Introduction and Overview



INRIA: Technology Excellence and Innovation

French National Institute of Research in Computer Science and Control

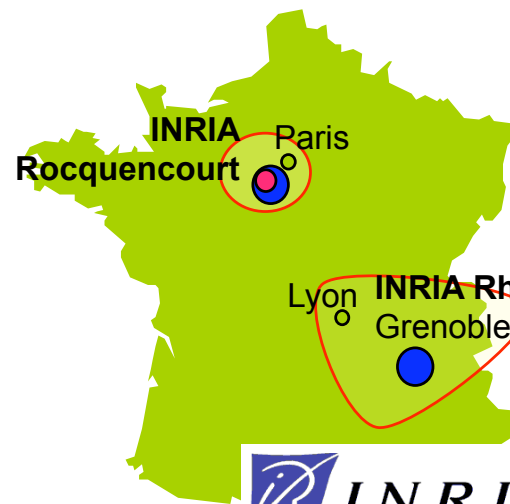
- <http://www.inria.fr>
- A public scientific and technological institute under the authority of the Ministry of Research and the Ministry of Industry

Mission

- Fundamental and applied research in information and communication science and technology (ICST)
- Technology transfer to industry

Some figures

- 2007
- ~4000 scientists
- State budget of 160M€
- 152 joint research project-teams in 8 locations in France
- 730 active research contracts
- 83 spin offs
- 100 actions selected in FP6



Started in 1992
 >500 people
 350 researchers & students
 26 research teams



<http://www.inrialpes.fr/>

Intermediate Model Overview

Bridges different SOA platforms in STP

- Workflow / process: e.g. BPMN, BPEL
- Architecture specification: e.g. SCA, EID, JBI
- Service Creation: e.g. JAX-WS, Policy Specification

Facilitates interoperability between editors

- Provides a central SOA conceptual bridge
- Avoids duplication of data
- Minimizes amount of transformation code
- Facilitates code generation from a variety of sources

Initial Contribution: INRIA (FR) and Engineering (IT)

- STP component: **org.eclipse.stp.model**
- EMF model plugins + transformation plugins
- Used in the Spagic 2.0 SOA Suite from Engineering



Large Variety of SOA Tools and Platforms

Eclipse SOA Tools Platform Project hosts several SOA editors

- BPMN
- BPEL
- Policy
- EID
- JAX-WS
- SCA
- JBI

Different roles use different editors / platforms

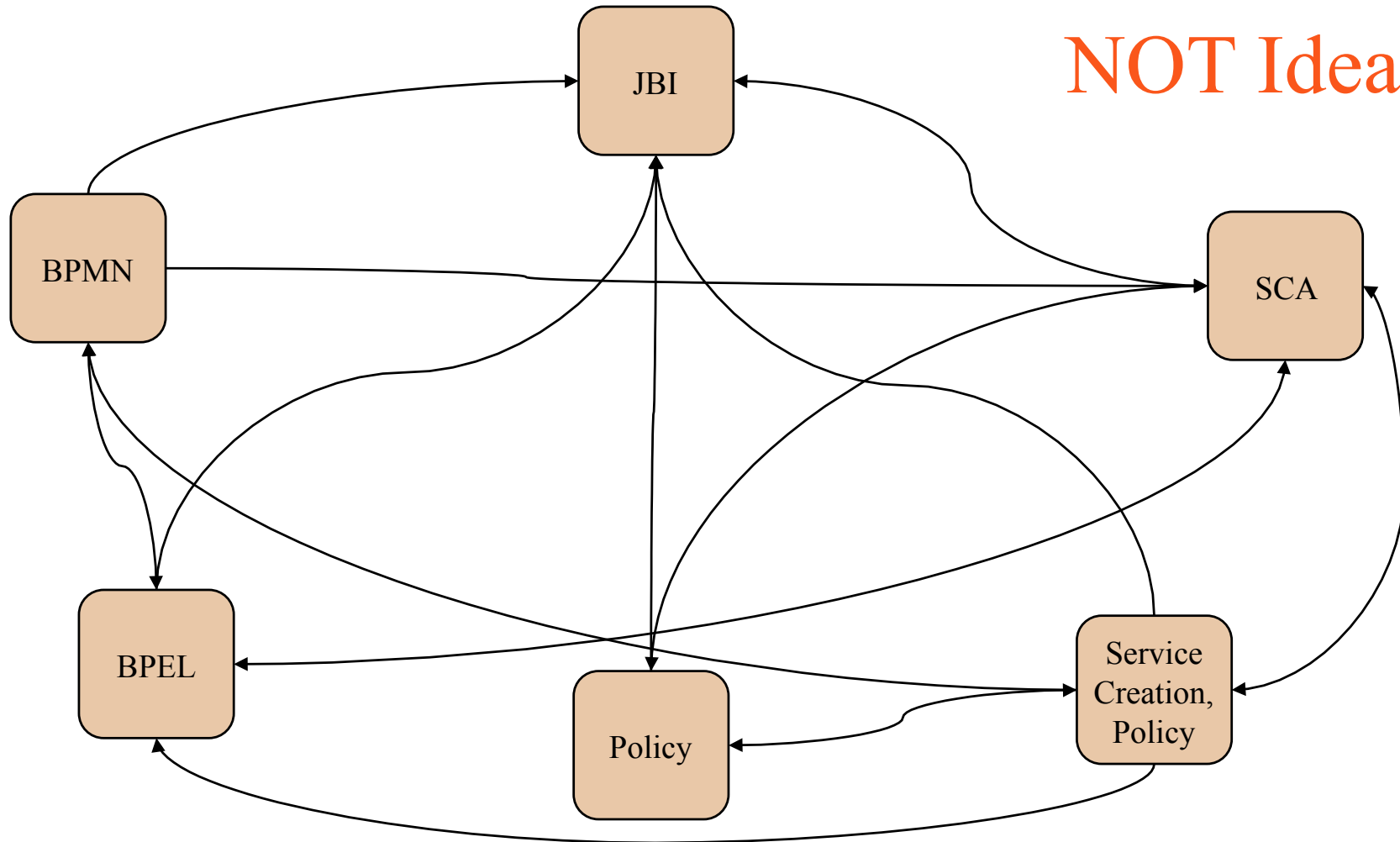
Information duplication is inevitable when moving across editors

- Same service can be seen in different spaces
- Processes, dependencies, compositions must be defined repeatedly

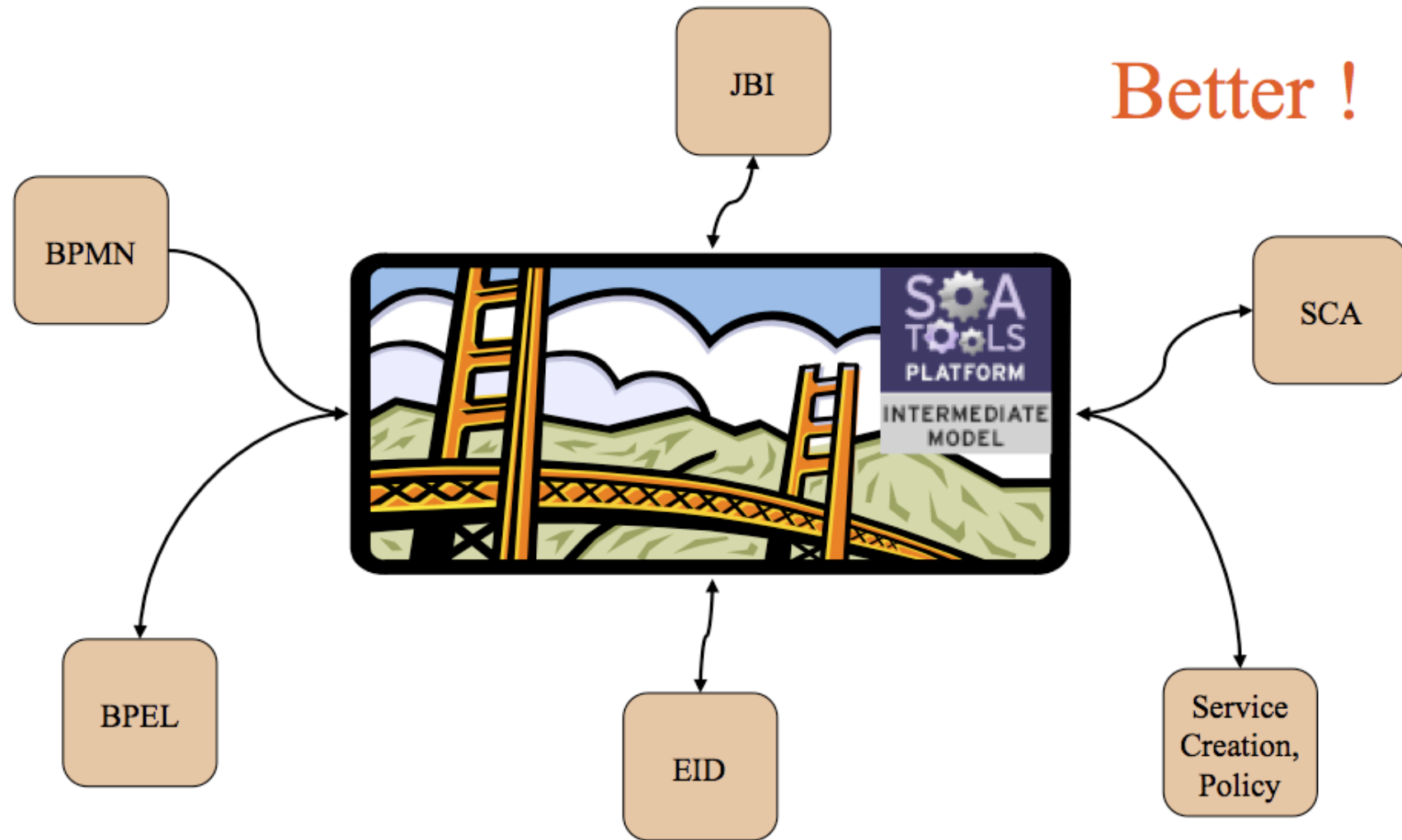


Integrating SOA Editors - A First Take

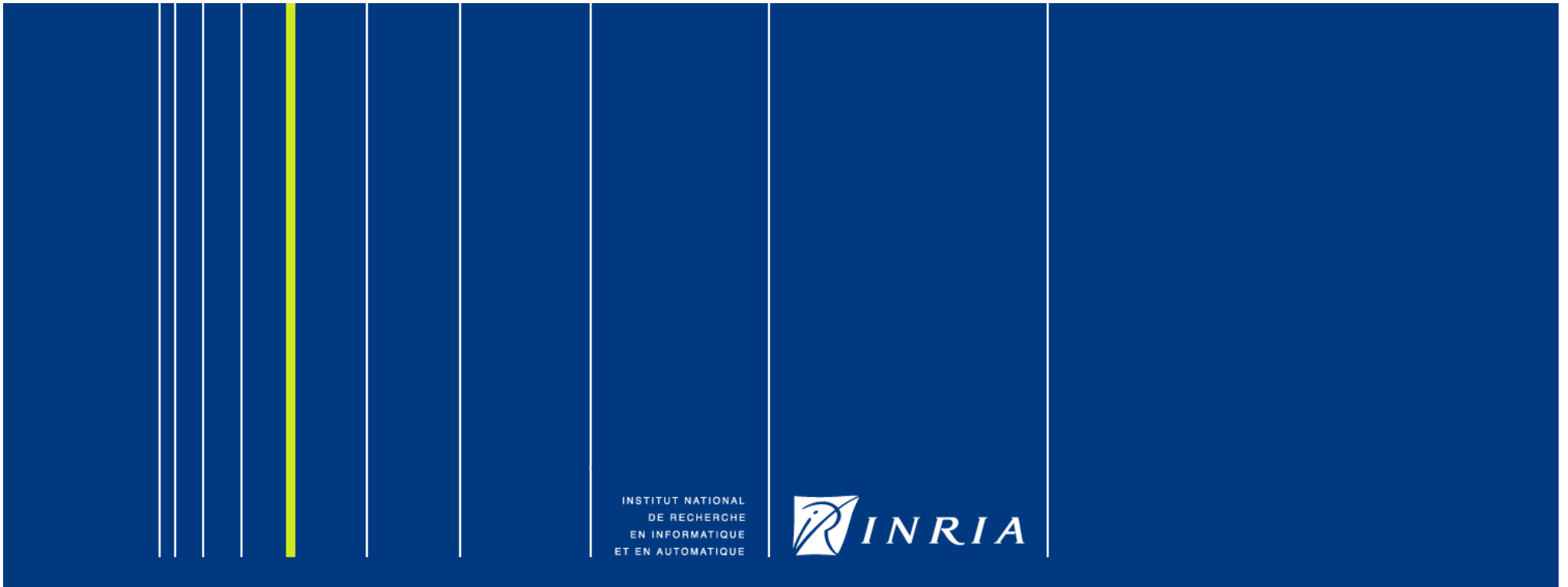
NOT Ideal !



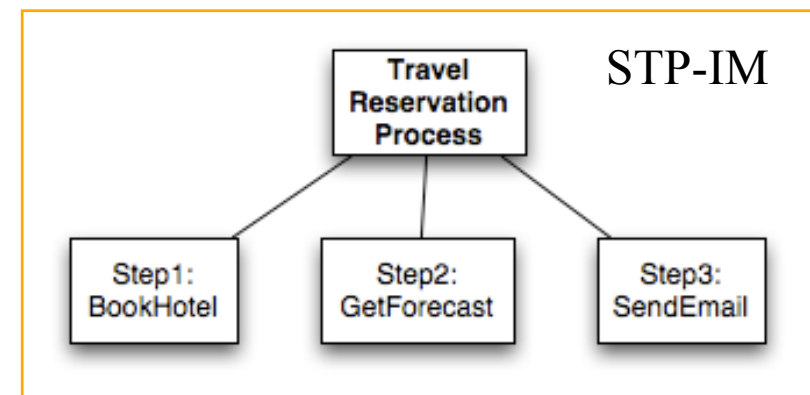
Bridging SOA Editors with STP-IM



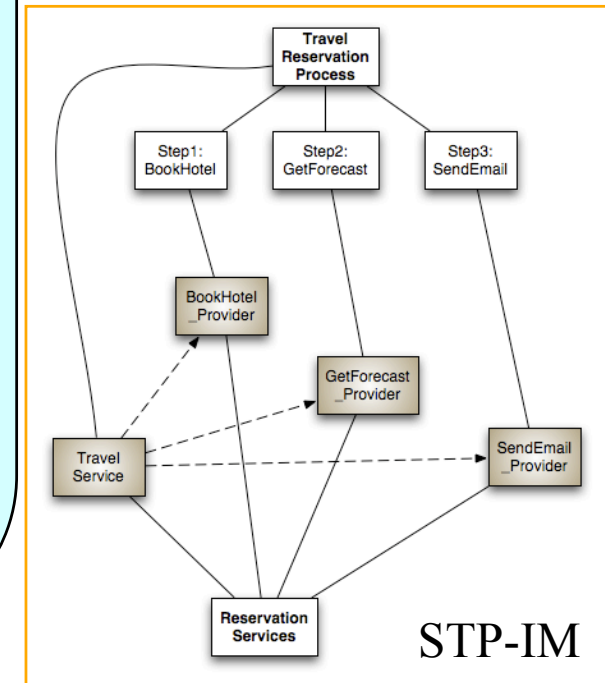
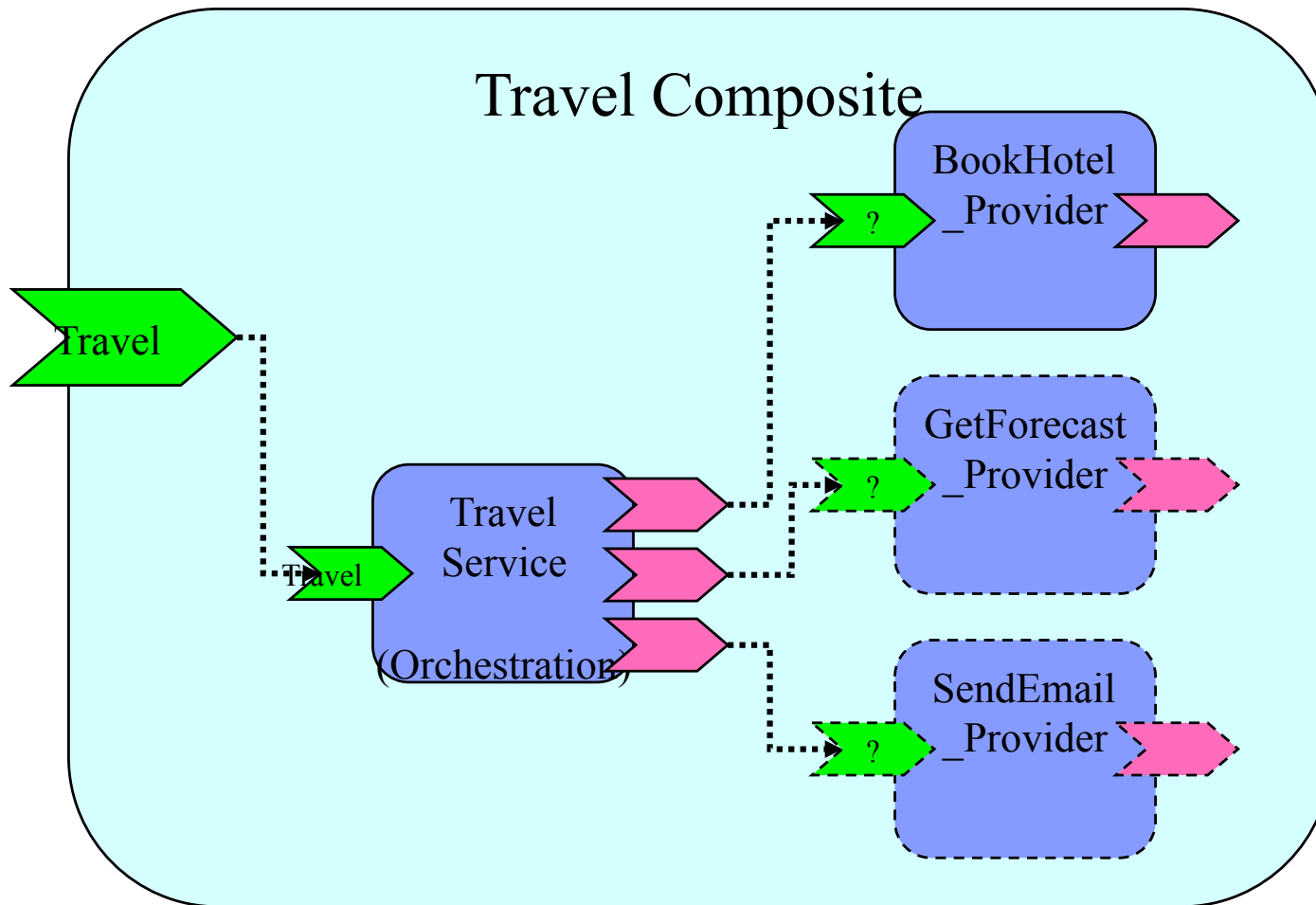
Virtual Use-Case



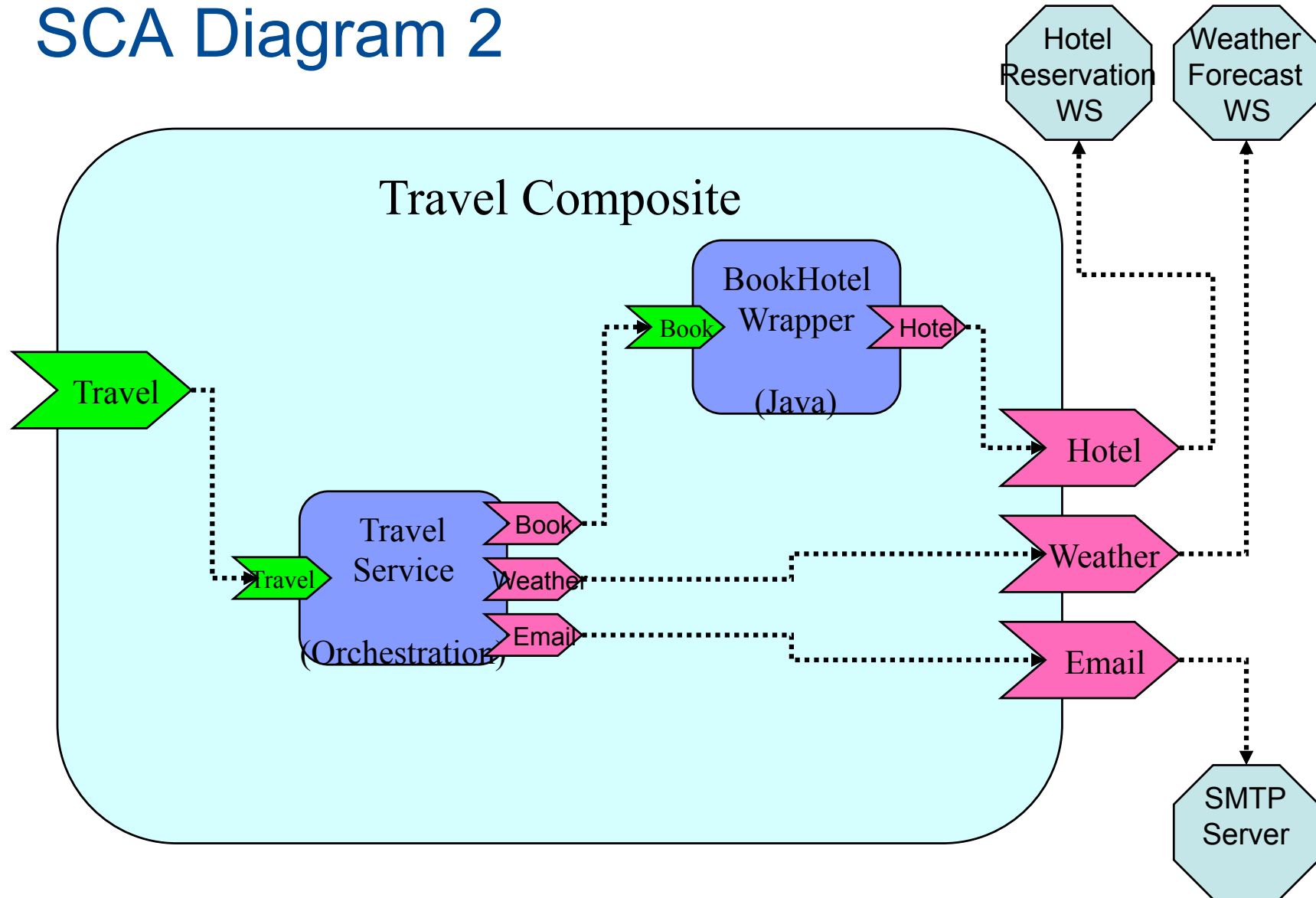
“Travel” Reservation Scenario



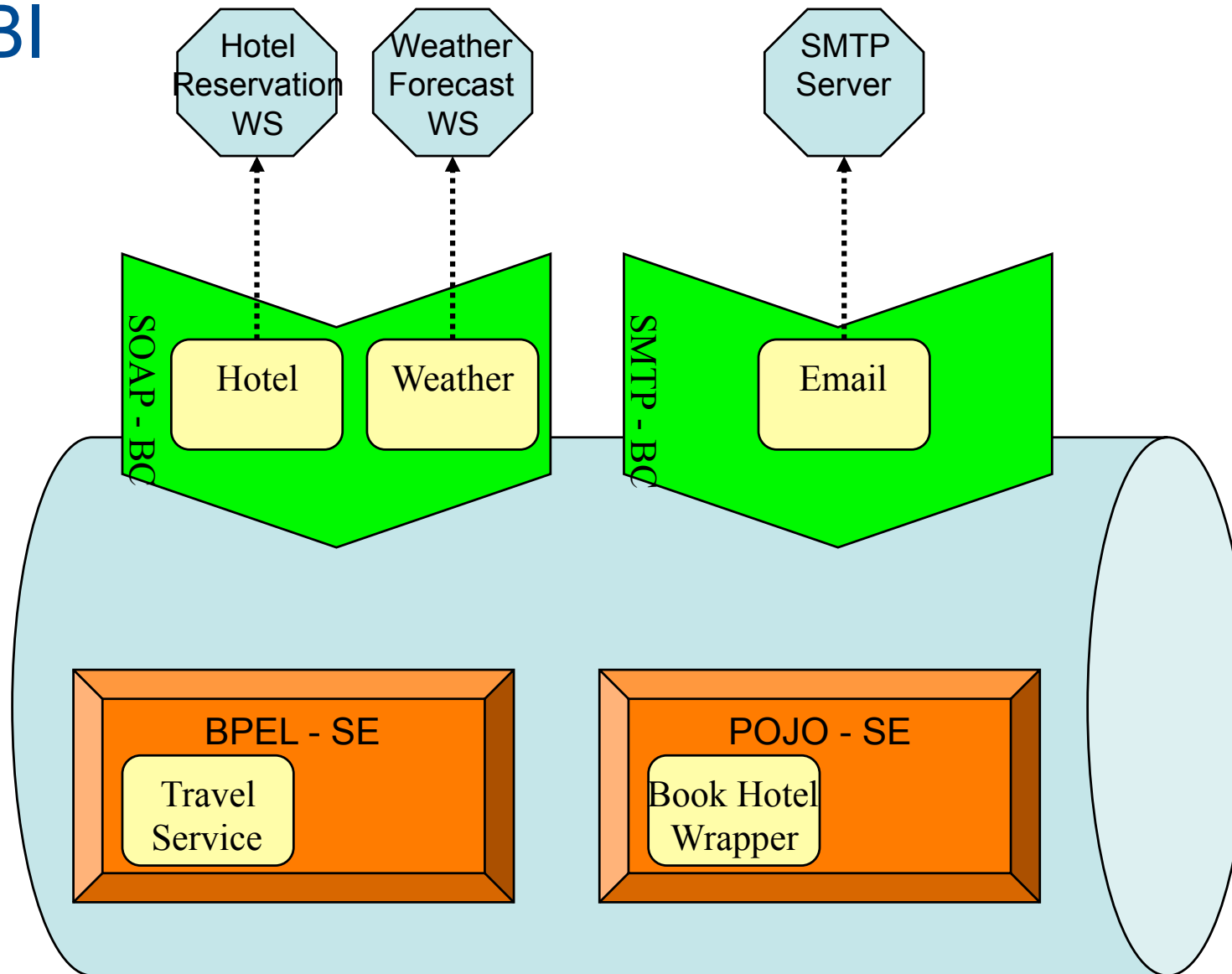
First SCA Diagram



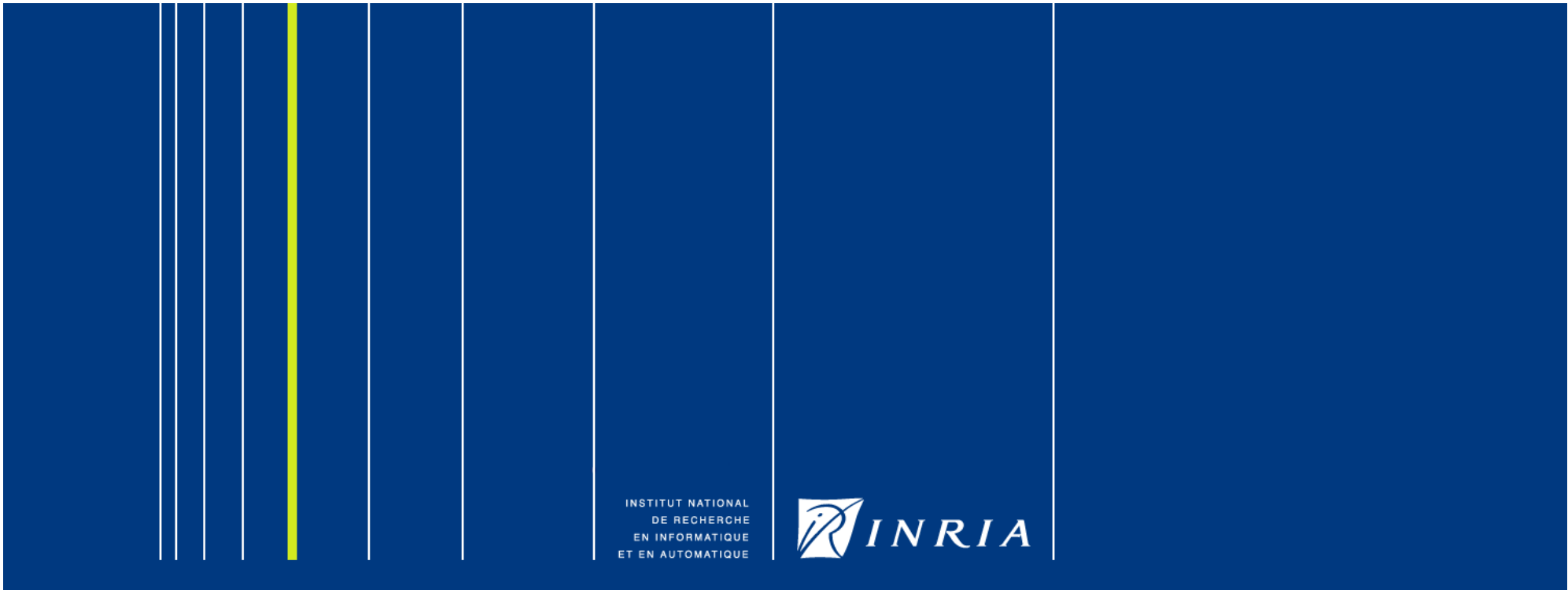
SCA Diagram 2



JBI



DEMO



Current Status

Improves the overall functionality of STP

Available Transformations (in the repository)

- BPMN to STP-IM
- SCA to STP-IM (basic functionality)
- STP-IM to SCA (basic functionality)

Runtime extension capabilities

Used in production in Spagic 2.0

- Additional JBI support
- BPEL support (to be transferred to STP)



Upcoming Contributions

New transformation plug-ins

- STP-IM to BPEL (immediate release)
- STP-IM \leftrightarrow EID
- STP-IM \leftrightarrow Service Creation
- Eclipse JWT \rightarrow STP-IM

Improvements and Extensions to existing plug-ins

Updated documentation: wiki and guides

Google Summer of Code - Juan Cadavid

- Funded project to contribute to STP-IM
- Transformations: BPMN-BPEL-SCA-EID
- Will investigate declarative approaches



Get and Contribute to STP-IM

Location:

- **HTTP**://www.eclipse.org/stp/im
- **SVN**://.../stp/org.eclipse.stp.model

Plugin Structure:

- org.eclipse.stp.im (STP-IM model)
- org.eclipse.stp.im.runtime.* (e.g. bpel, jbi)
- org.eclipse.stp.im.in.* (e.g. bpmn, sca)
- org.eclipse.stp.im.tool.in.* (e.g. bpmneditor)



Questions?

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