RNTL JOnES Project

France Telecom and the open source ESB PEtALS platform

Alexandre Lefebvre, Nicolas Rivierre

France Telecom

the RNTL JOnES project 1/2

→ RNTL platform project labelled in 2005
  - Will end in Q1 2008

→ partners
  - <u>INRIA</u>
  - EBM Websourcing
  - ENSTIMAC
  - France Telecom
  - Open Wide
  - ScalAgent Distributed Technologies

→ JOnES has a booth at STIC 2007
  - come and visit us!

the RNTL JOnES project 2/2

➔ goal: framework for the creation of Enterprise Service Bus (ESB)
- based on the Java Business Integration (JBI) standard

➔ PEtALS platform
- open source distribution at OW2: petals.objectweb.org
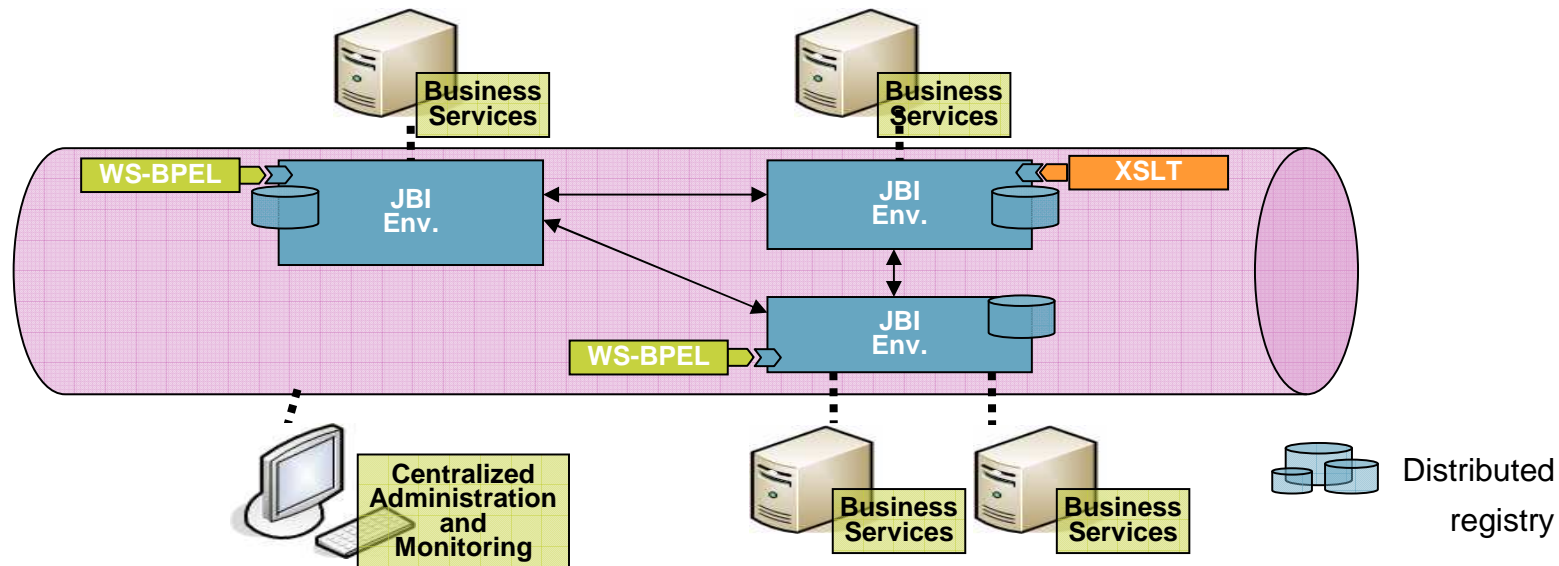
France Telecom and JOnES on the R&D side

➔ contributions to the project
  - architecture, state of the art and requirements
  - use case based on FT ESB experience
  - SLA (Service-Level Agreement) design and specification

➔ acquisition of competence in the ESB domain & mutualisation of R&D work developed within FT, as part of other projects
  - administration / monitoring framework (RNTL SelfWare)
  - reliable service composition (RNTL Faros)

➔ perspectives : coming RNTL SemEUsE project (2008-2010)
  - integration of a management framework in PEtALS
    - composite probes, monitoring …
  - SLA enforcement & mapping to technical SLO - relies on monitoring
    - interest in agreement negotiation

France Telecom ESB practice

➔ **France Telecom Group SOA prescription**
  - concerns web service publication and consumption
    - Governance, use of bus, WSDL formats…

➔ **technical web services bus**
  - for WSP/WSC exchanges
    - deployed since 2006
    - B2B planned by end 2007
  - mutualisation of technical functions
    - logging, service authentication and authorisation, IT SLA…
  - several scopes for communication
    - IS-services, services-services, B2B

France Telecom and ESB

Application domains city-map

Users domain

Networks domain

SDP domain

Service Platform

Service Platform

PFS

functions

enabler

NSB

NSB

Group Enabler

Group Enabler

Group Enabler

Services database

Services database

IT domain

NSB

IT APP

IT content

Internet domain

Partner content

Partner SP
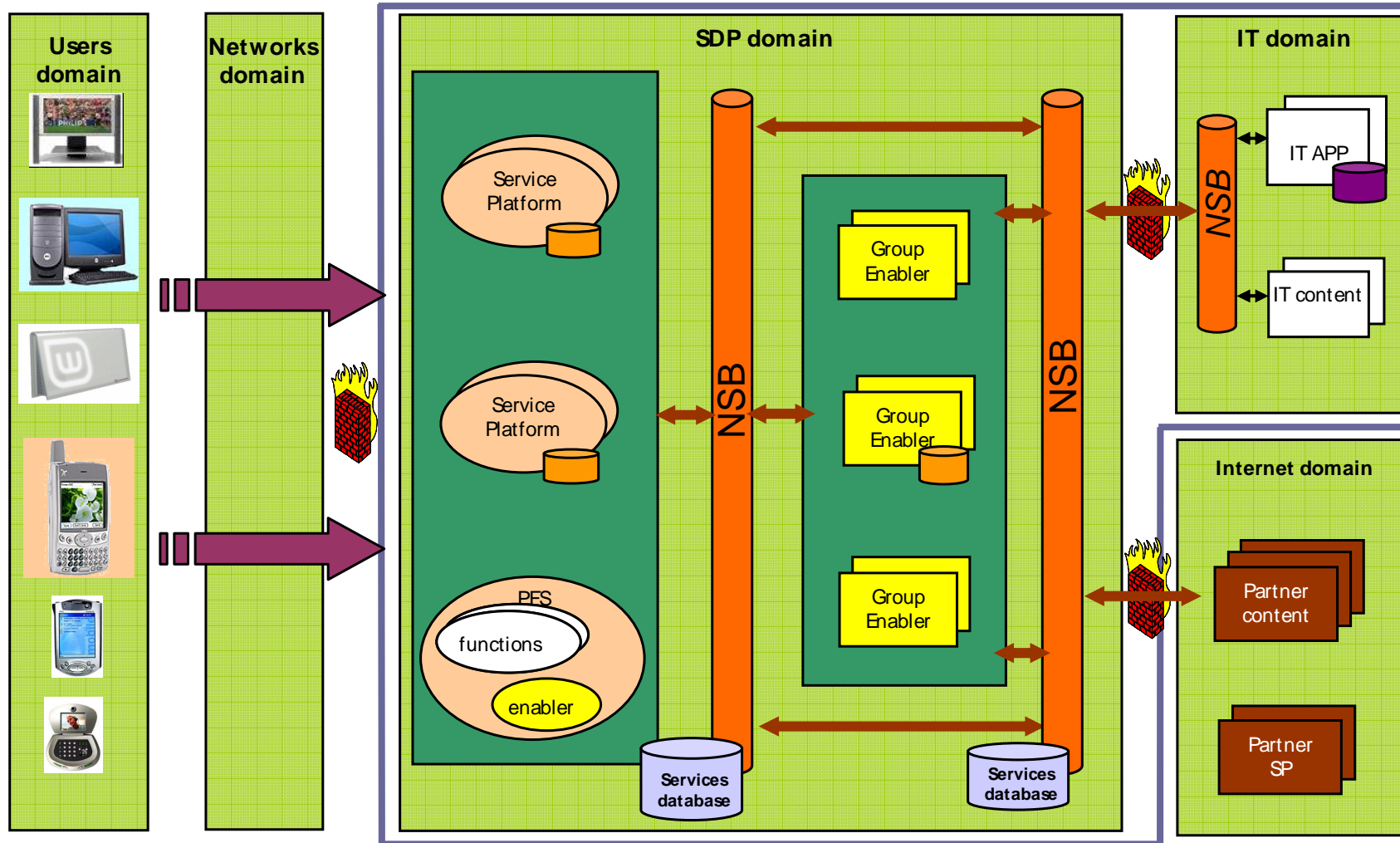
IAS scope

NSB NExT Service Broker infrastructure

future work on ESB within France Telecom

➔ **goal: to go further than a technical web services bus**
- higher mediation functions
- orchestration

➔ **work planned for 2008**
- qualification of products
  - respecting JBI: include PEtALS as an open source alternative
- on a real FT use case

➔ **interests of PEtALS**
- low cost open source alternative
  - for internal use and Orange business customers
- openness
  - re-use existing infrastructure

SOA software architecture target

Business Process Layer
- Usual programming
- BPM

Application A

Application B

BAM Application

External Application

SOA Mediation & Communication Layer (i.e., ESB)

Business-Level Mediation
- Content-based routing, user-based mediation (business SLA, security, etc.) Adaptation
- Message transformation, connectors (protocol adaptation)

Normalized "Web Service" based Bus
- Support of SOAP and REST over HTTP transports
- Support synchronous, asynchronous and event-based communication Patterns
- "SOA agent"-based mediation (SLA, security, etc.)