

Enterprise Mashups

SAP Research RoofTop Marketplace

SYSTEMATIC THOUGHT LEADERSHIP FOR INNOVATIVE BUSINESS



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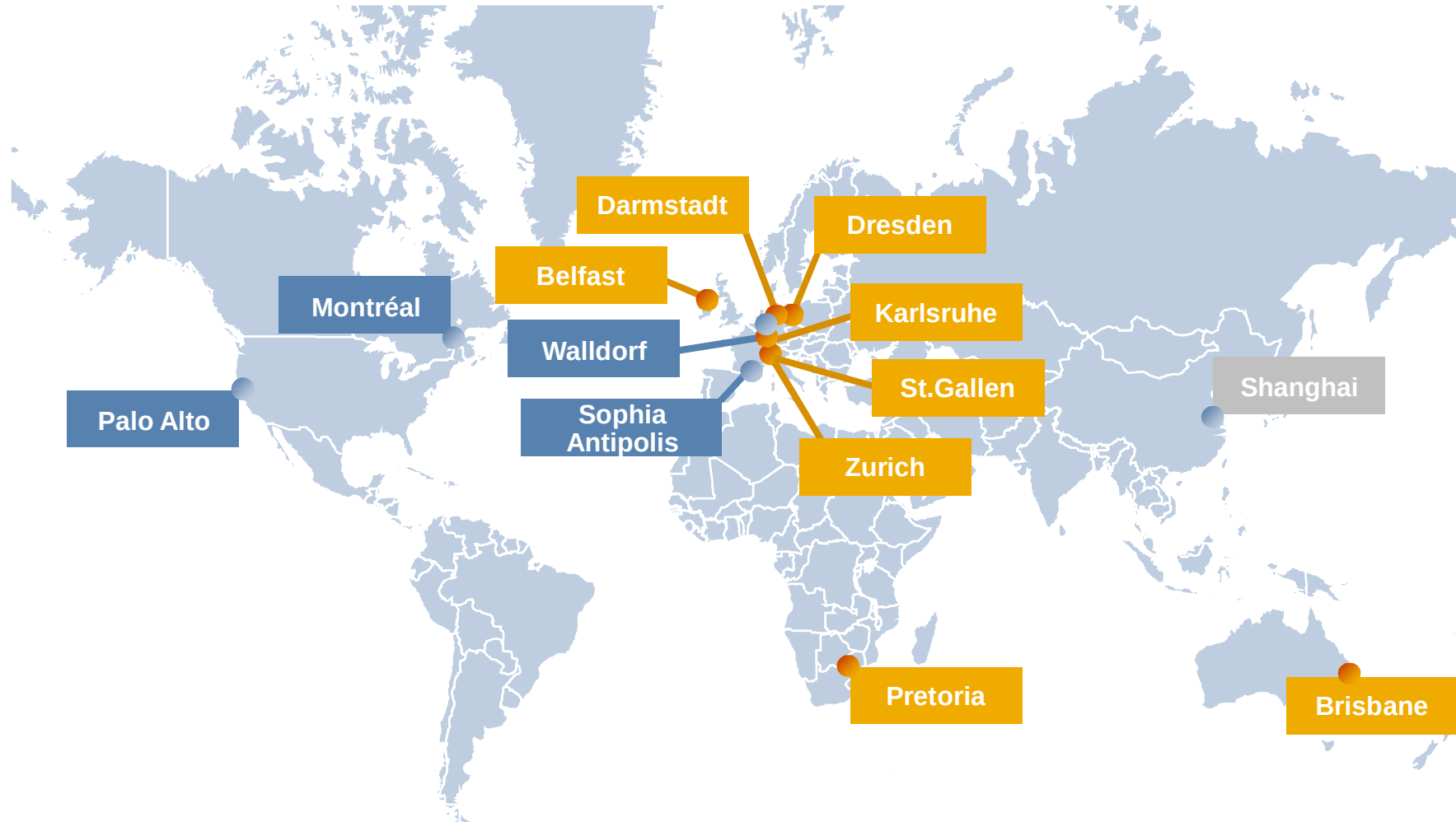
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³ University of St. Gallen, **=mcminstitute**, Switzerland

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SAP Research Global Network



- SAP Labs-based Research Centers
- Campus-based Engineering Centers
- planned

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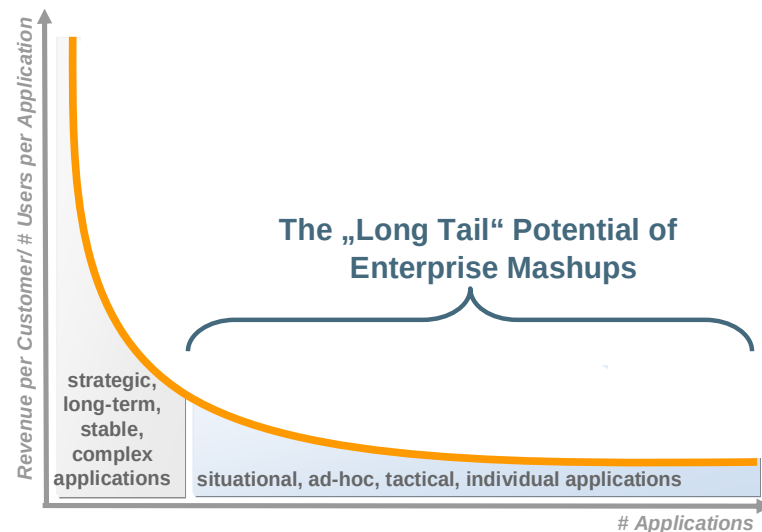
“Yes we can!”

Empowering the Non-Technical Business Users



New approaches/ tools aim at enabling the mass of end-users to create enterprise-level applications according to their individual needs

- “Enterprise Mashup[s] ... unleash a tremendous amount of value” (Forrester)
- Top 10 Strategic Technologies for 2009 (Gartner)
- \$700 Million Market by 2013 (Forrester)



Enterprise Mashups

Definition



An Enterprise Mashup is a Web-based resource that **combines** existing resources, be it content, data or application functionality, from more than one resource in enterprise environments by empowering the actual **end users** to create and adapt individual information centric and **situational applications**.

Enterprise Mashups

Enterprise Mashup Stack and User Roles



Enterprise Mashup Stack

Mashup

- **Composition of Widgets (Wiring)** to enterprise-class applications



Widget

- **User-friendly Building Blocks**
- **Provide graphical and simple user interaction mechanism**
- **Abstracting** from the complexity of the underlying resources



Resource

- **Core Building Blocks of Mashups**
- **Respresent actual contents, data or application functionality**
- **Encapsulated via well-defined interfaces (APIs; WSDL, RSS/ Atom Feeds, ...)**



User Roles

End-Users run Mashups scenario

- Consume Mashup scenario
- Personalize individual environment (e.g., can change the background color, hide buttons, etc.)

Key users create Mashup Scenario

- Add pre-build widgets (from the catalogue)
- Connecting widgets by wiring their in-/out- ports

Consultants create Widgets

- Binding generic UIs to resources/ services
- Transforming and aggregating data

Developers implement the services

- Creates and deploys services – makes resources available (e.g., RSS Feeds, SAP Enterprise Services)

Enterprise Mashups

Enterprise Mashup Stack and User Roles



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Customer Data	
NAME	ADDRESS
Siemens	Wittelsbacherplatz 2 / 80333 Munich / Germany
Automation 219114956	456 West Ohio Street / Boston IL 60610 / USA
ABB Switzerland	Brown Boveri Strasse 6 / 5401 Baden / Switzerland

Resource

- **Core Building Blocks of Mashups**
- **Respresent actual contents, data or application functionality**
- **Encapsulated via well-defined interfaces (APIs; WSDL, RSS/ Atom Feeds, ...)**

```
<?xml version="1.0" encoding="UTF-8"?>
<root xmlns="http://www.sap.com/2005/03/mashup" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.sap.com/2005/03/mashup http://www.sap.com/2005/03/mashup.xsd">
  <widget type="Table">
    <table>
      <thead>
        <tr>
          <th>NAME</th>
          <th>ADDRESS</th>
        </tr>
      </thead>
      <tbody>
        <tr>
          <td>Siemens</td>
          <td>Wittelsbacherplatz 2 / 80333 Munich / Germany</td>
        </tr>
        <tr>
          <td>Automation 219114956</td>
          <td>456 West Ohio Street / Boston IL 60610 / USA</td>
        </tr>
        <tr>
          <td>ABB Switzerland</td>
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        </tr>
      </tbody>
    </table>
  </widget>
</root>
```

Mashup Tools and Platforms



IBM Mashup Center



Enterprise Mashups

Enterprise Mashup Stack and User Roles



Enterprise Mashup Stack

Mashup

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<?xml version="1.0" encoding="UTF-8"?>
<root xmlns="http://www.sap.com/ERP/REST/1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.sap.com/ERP/REST/1.0 http://www.sap.com/ERP/REST/1.0.xsd">
  <customer>
    <name>Siemens</name>
    <address>Wittelsbacherplatz 2 / 80333 Munich / Germany</address>
  </customer>
  <customer>
    <name>Automation 219114956</name>
    <address>456 West Ohio Street / Boston IL 60610 / USA</address>
  </customer>
  <customer>
    <name>ABB Switzerland</name>
    <address>Brown Boveri Strasse 6 / 5401 Baden / Switzerland</address>
  </customer>
</root>
```

SAP Research RoofTop Marketplace



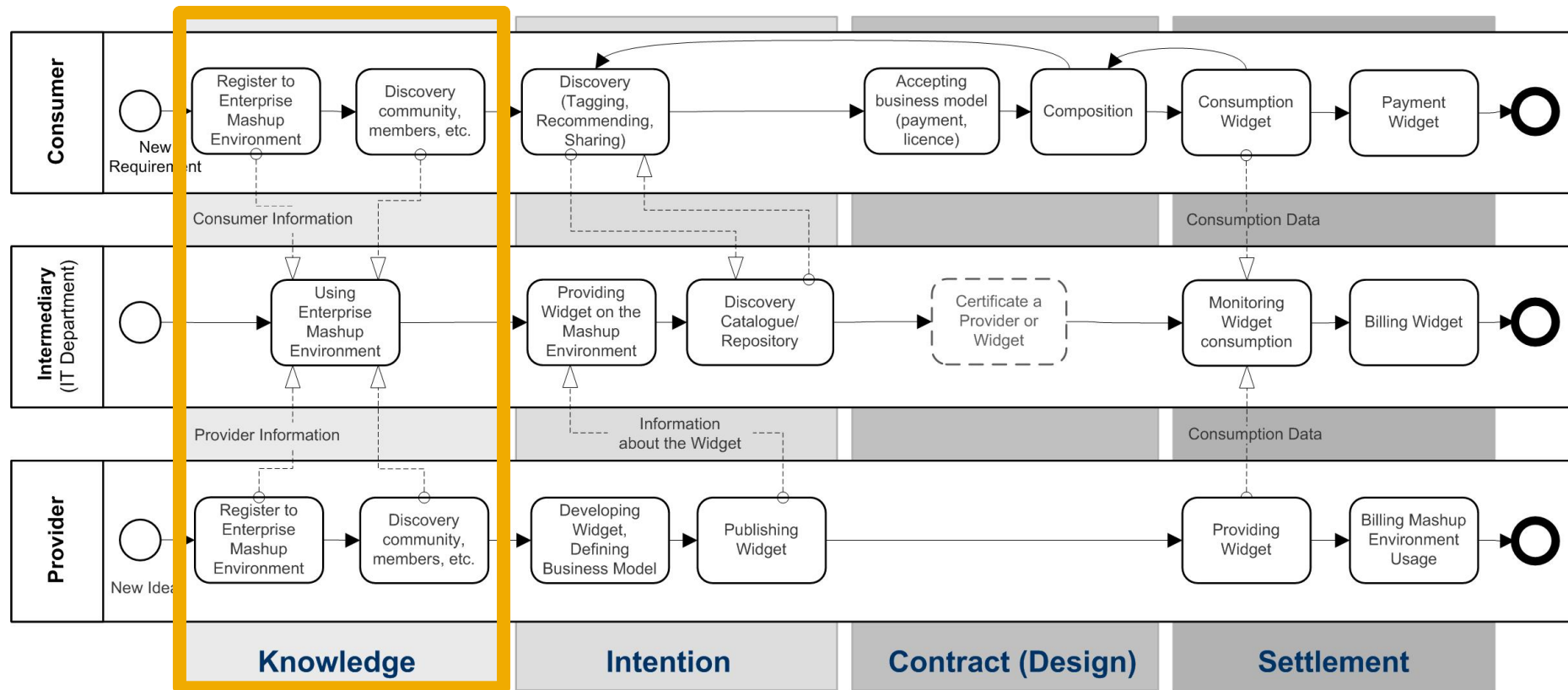
SAP Research RoofTop Marketplace

Demonstration of the Research Prototype



SAP Research RoofTop Marketplace

Interaction View*

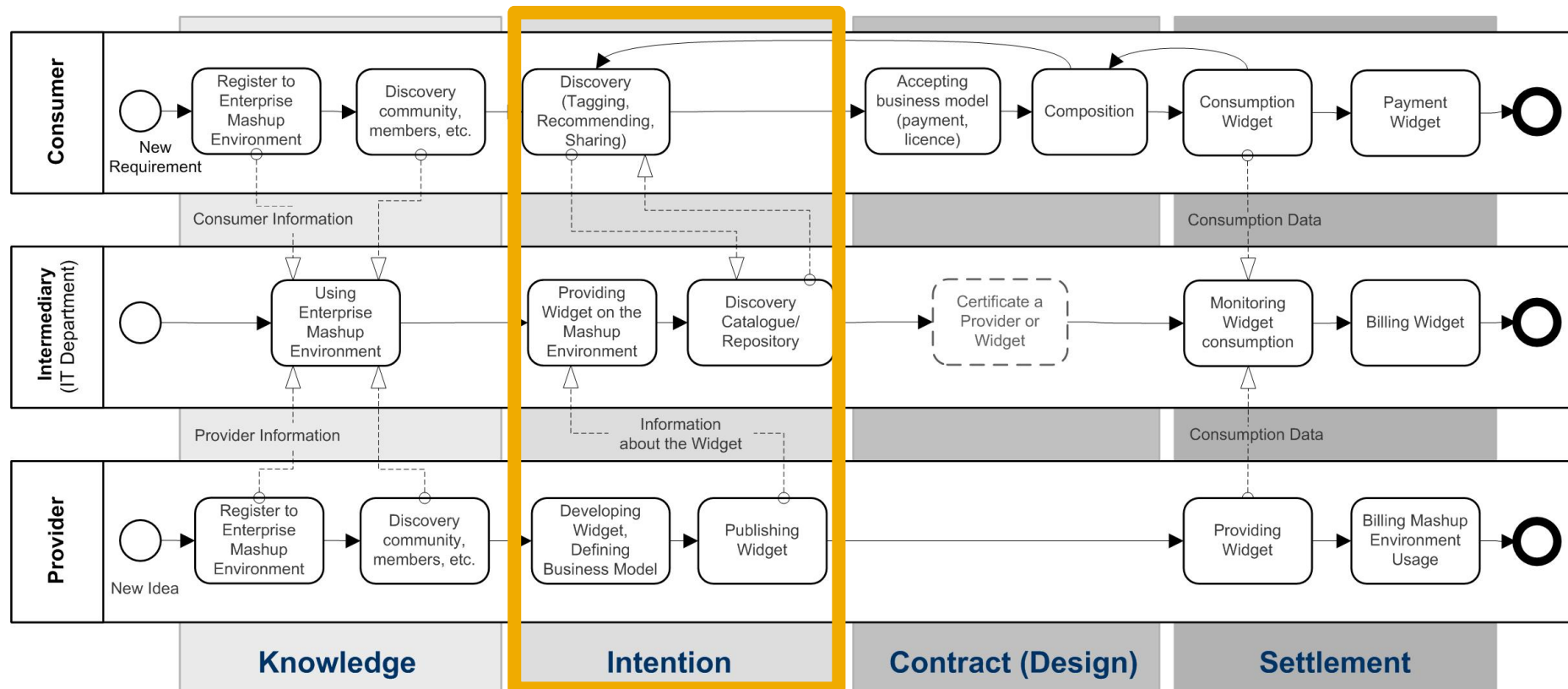


Knowledge Phase

- Single Sign On (SSO) within the SAP network
- Demos and videos demonstrate the features of the prototype
- Configuration of the individual user profile (your context)

SAP Research RoofTop Marketplace

Interaction View*

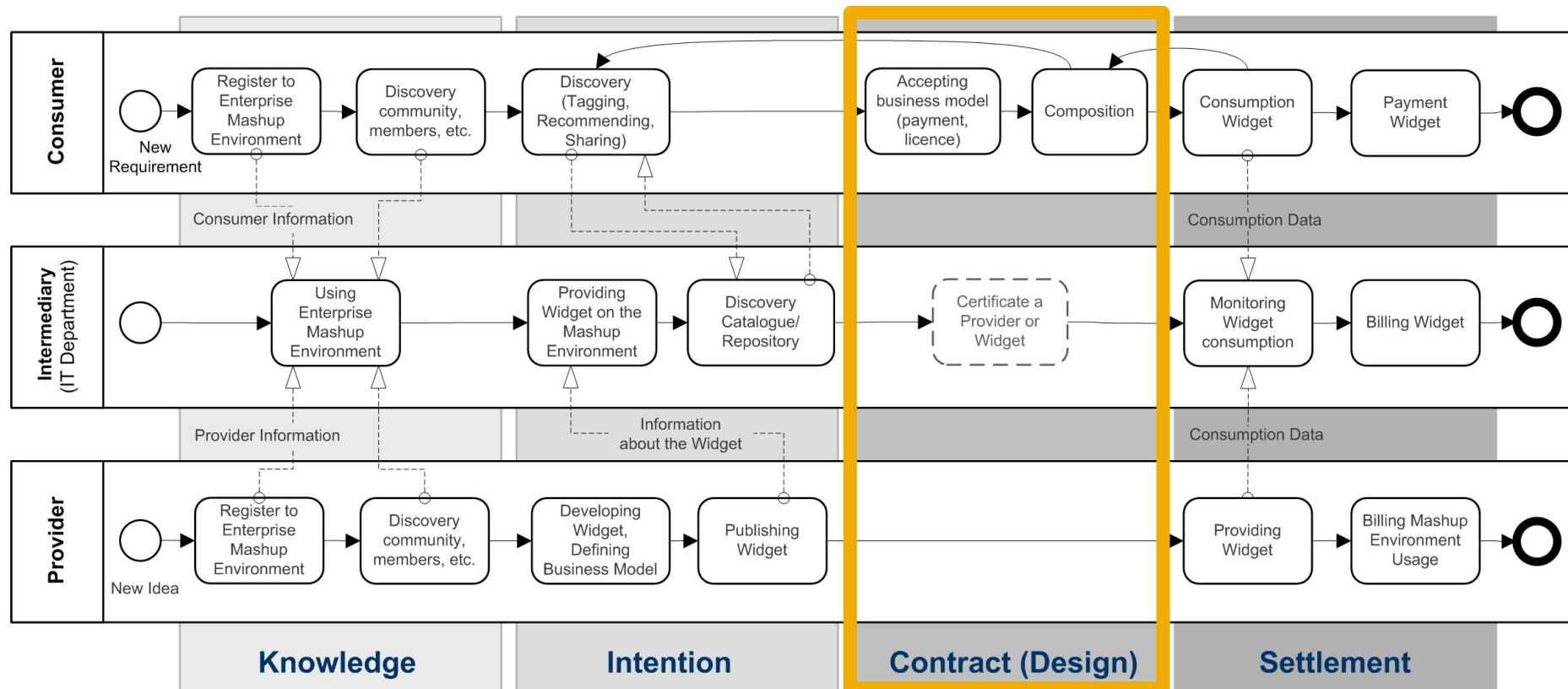


Intention Phase

- Mashup and widget catalogue for discovery the SAP Research RoofTop Marketplace ecosystem
- Community features like tagging, rating, or recommending of widgets
- Extensive information (provided by three agent roles; consumer, intermediary, and provider) to select a mashable component

SAP Research RoofTop Marketplace

Interaction View*

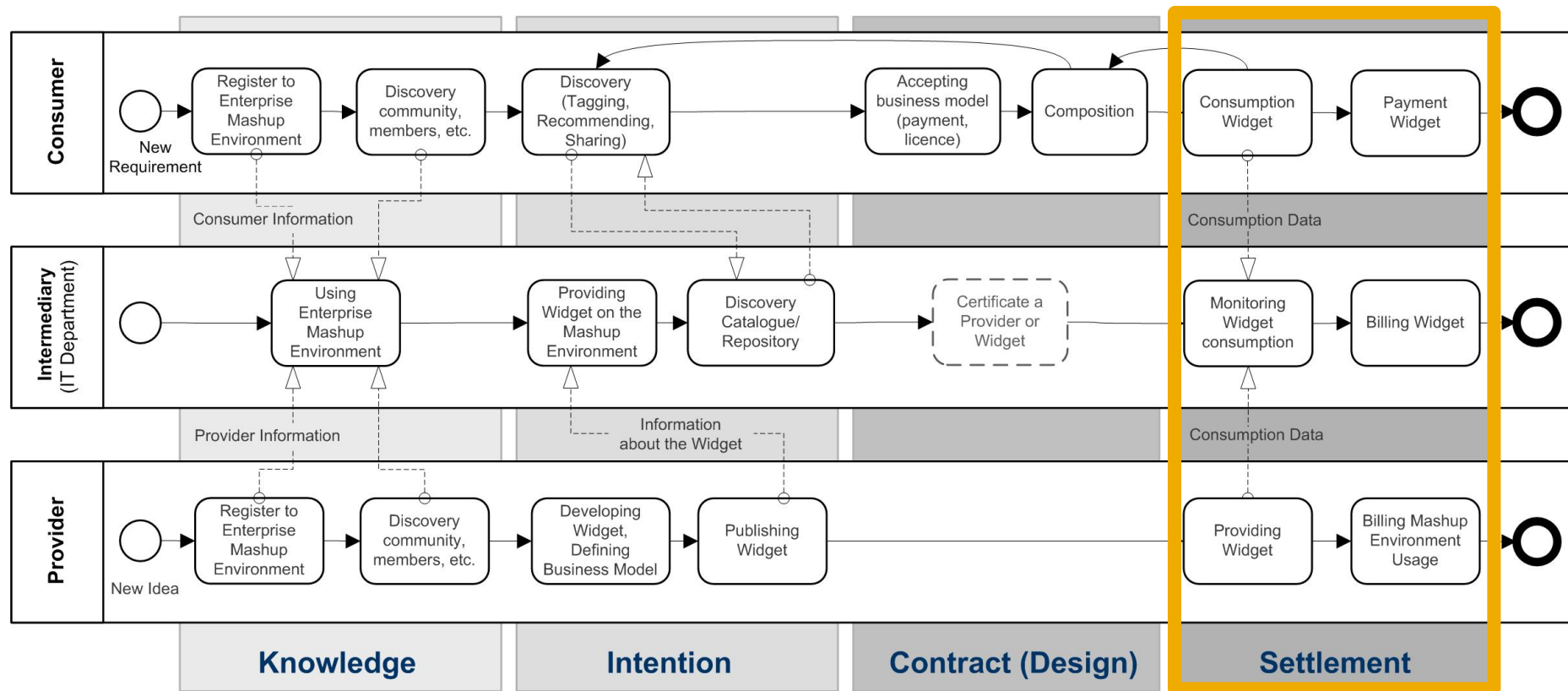


Contract (Design) Phase

- Adapting or creating an individual Mashup by wiring different components (widgets)
- Accepting the underlying business model (price, licence condition, etc.)

SAP Research RoofTop Marketplace

Interaction View*



Settlement Phase

- Consumption of Mashups (the design features are locked)
- Monitoring of consumption data
- Billing of using the Enterprise Mashup environment

SAP Research RoofTop Marketplace Screenshoots

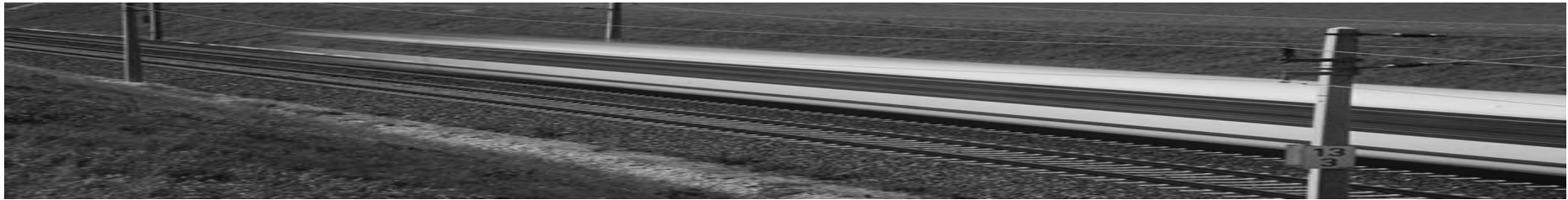


The screenshots illustrate the SAP Research RoofTop Marketplace interface, which is designed for Enterprise Resource Planning (ERP) systems. The interface includes a top navigation bar with options like 'Add Content', 'My Favorites', and 'My Mashups'. The main content area is divided into several sections:

- Customer Data:** A table listing various companies and their details, including ID, NAME, ADDRESS, and a small map view.
- Google News Siemens:** A section displaying news articles related to Siemens, with a list of articles and a small image display.
- Google News:** A section displaying aggregated headlines and a search engine of many of the world's news sources.
- Google News Hub:** A section displaying the latest news from the SAP Research news hub.
- ASX Stocks Declines:** A section displaying the latest news from the ASX stock market.
- Yahoo News:** A section displaying the latest news from Yahoo.
- Google Maps:** A map view showing a city (likely Munich) with various landmarks and streets.
- Google News (Detailed View):** A detailed view of a specific news article, showing the headline, text, and a small image.

The interface is designed to be highly customizable, allowing users to create their own 'mashups' of data and content. The bottom of the interface shows a status bar with information about the current session, including the user's name, the date, and the time.

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- **Future Enterprise Mashup Platform**
- **Organization similar to a marketplace covering typical market phases (knowledge, intention, contract/ design, and settlement)**
- **Leveraging the wisdom of the crowds to create ad-hoc information centric applications (Context-Aware Enterprise Mashups)**
- **Integration of community features (Tagging, rating, sharing, recommending)**

Thank you!



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