esc@sap.com
http://esc.sap.com

# Composite Application Use-Cases


**Community Advisory Group Composition Platform**

February 28, 2007

Version 1.0

## Content

## Introduction

The Community Advisory Group Composition Platform (CAG CP) was formed as part of the Enterprise Services Community (ES Community) program to allow partners to influence the evolution of the SAP NetWeaver Composition Environment. At the same time, SAP benefits from the group by getting an insight into partner requirements and early feedback on the product itself. The member companies are from all over the globe and represent a wide range of business models (independent software vendors (ISVs), system integrators (SIs), and infrastructure providers), sizes (5-55.000 employees) and SAP® background (none to global SAP partners).

As part of the group's work, a classification of composite application use-cases was put to a test. These use-cases were derived from experiences with more than 100 ISVs and SIs. They were compiled by the market development engineering team (MDE) of the SAP platform ecosystem organization.

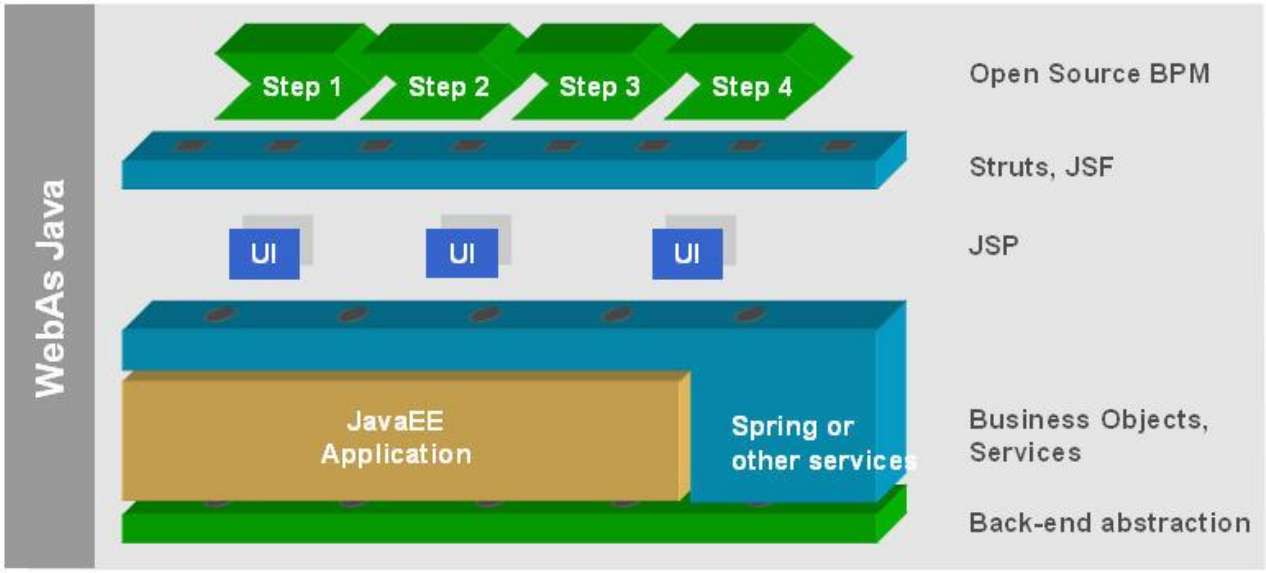
The CAG CP was asked to:

- Verify the validity of this classification
- Check whether there are further relevant use-cases in addition to the ones already identified
- Prioritize the use-cases according to the relevance for the group members.

## Use-Cases

On the following pages, we'll give an overview on the use-cases that were identified.

### I - Yet Another Java EE Platform for Application



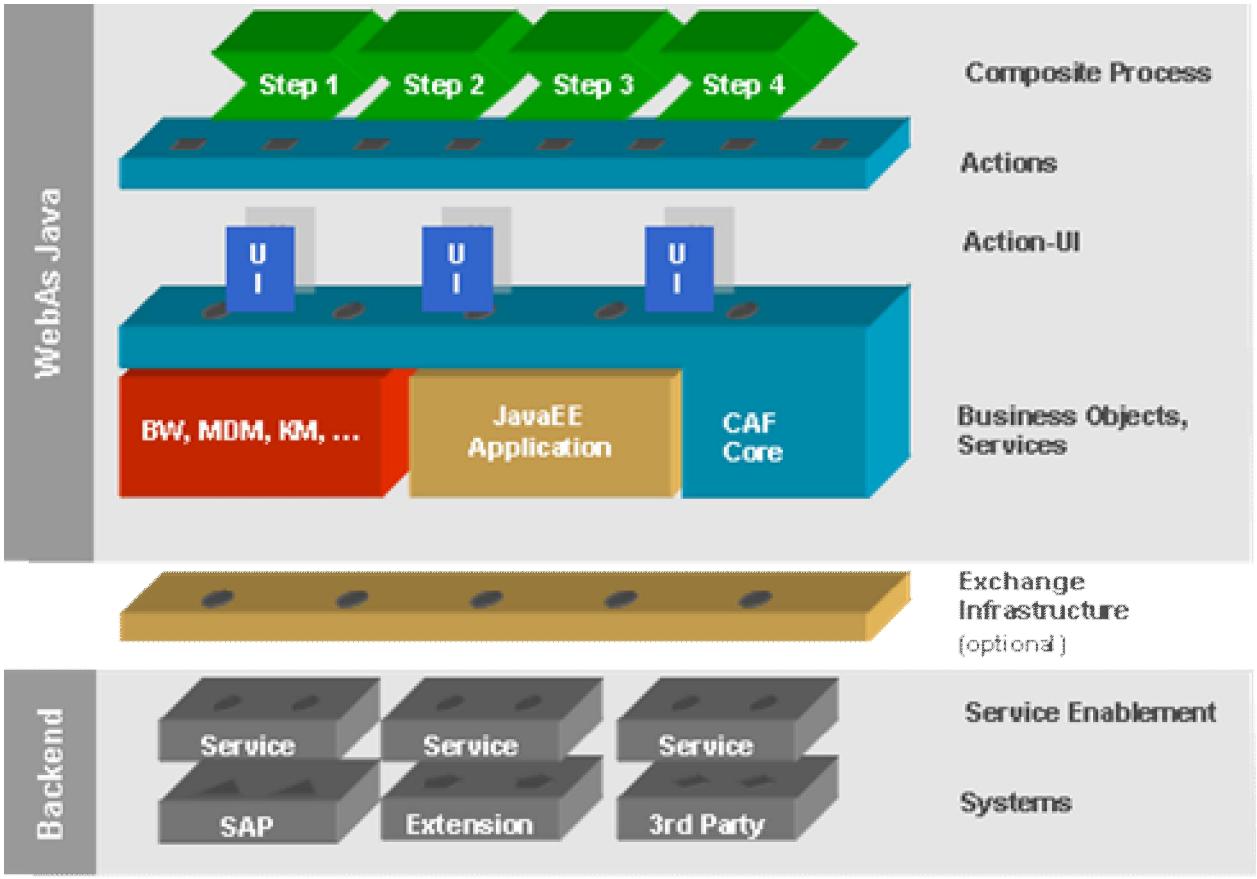

- **Established ISVs, customers**
- **Intellectual Property of the ISV/customer lies in the business logic**
- **Application built on other Java EE platform, migrated to SAP**
- **Expect SAP to deliver business objects and services and standard app server**
- **No commitment to SAP NetWeaver**

This use-case is the main entry scenario for most ISVs that own a Java EE-based solution as well as for customers that have Java EE-based custom development (most of the time in a department separate from the SAP practice). In many cases, these applications make heavy use of open source libraries as well.

The expectation of the SAP NetWeaver® Application Server (SAP NetWeaver AS) component in this case is compliance to the latest Java EE standard, support for commonly used open source libraries, and most important, easy migration from the previously used application server to the SAP NetWeaver platform.

Only if the ISVs are successful at this stage they will consider using additional features of the SAP Net-Weaver platform if these features provide added value for total cost of development and/or total cost of ownership.

## II - Increased Use of SAP NetWeaver



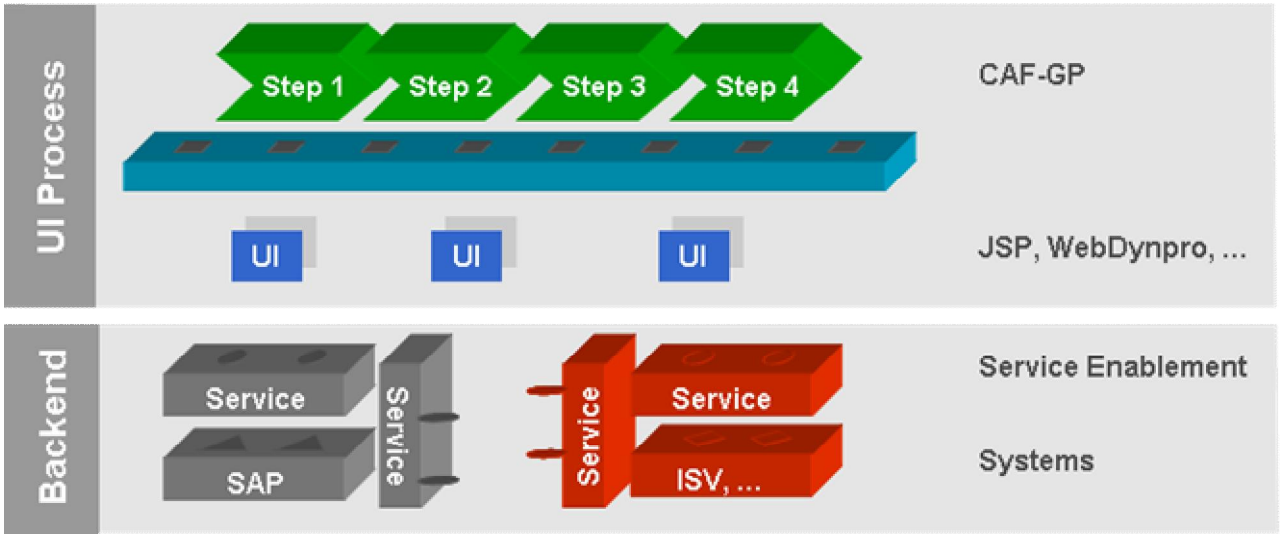

- **Next-generation ISV products, SIs at customers, customers**
- **Intellectual property lies in the business logic and use of SAP NetWeaver**
- **Main benefits: Time to market, developer productivity, and application quality**
- **Expect SAP to deliver services and complete platform**
- **Application designed for SAP NetWeaver, strong commitment to SAP NetWeaver**

This use-case is relevant for ISVs that ported their solution to SAP NetWeaver and see added value in using more functionality of the platform, as well as for SIs or customer IT departments doing custom development.

A whole range of different scenarios is covered by this use-case from business intelligence BI reporting over the data of a Java EE-based application to complete composite applications.

The main benefits are derived from existing functionality that can easily be used without explicit coding of application logic. Everything that SAP delivers that is usable with low overhead (configuration, modeling, simple, but powerful frameworks) and add immediate value to the application end-user will be considered.

## III - Partner Application and UI Process



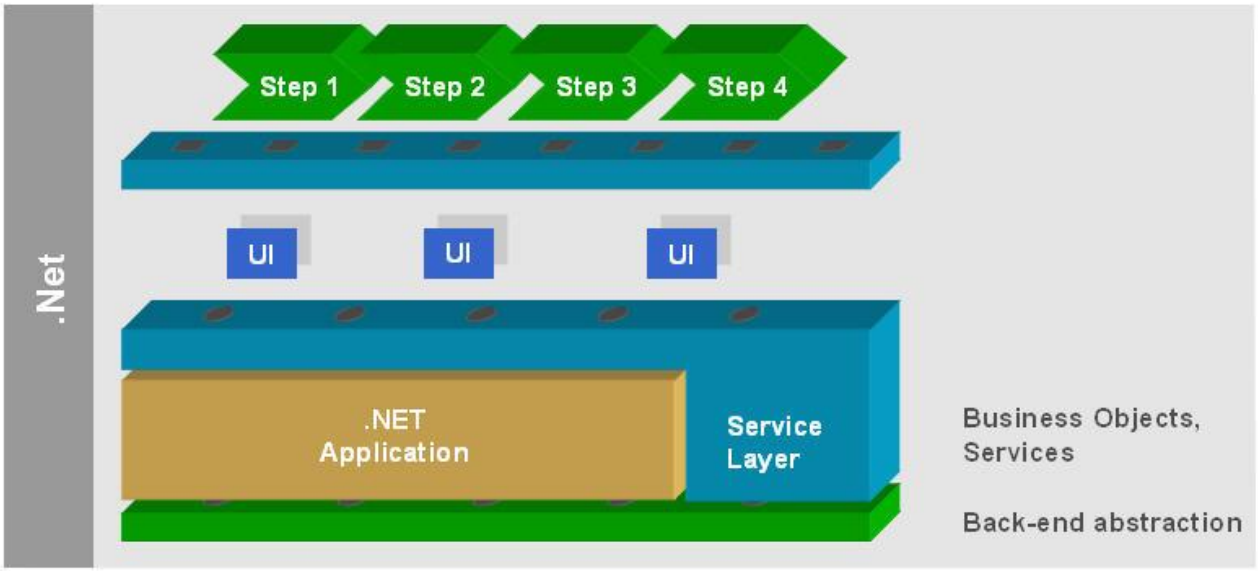

- **Established ISVs, customers, and SIs**
- **Intellectual property lies in the business logic of the component**
- **Processes may go across SAP and partner applications**
- **Customer or SI can/should configure process, workflow**
- **Expect SAP to deliver services, services provisioning, and composition tool**

This use-case covers improved process integration of business logic that is either custom developed or available from an ISV with SAP business logic that most of the time resides on the ABAP™ programming language side.

The task at hand includes service enabling this business logic, sometimes adding more appealing UIs and finally integrating it in a user driven process.

It's expected that SAP solutions are readily service enabled. At the same time, it should also be a breeze to service enable third-party applications or own business logic. UI creation and process orchestration can utilize a model-driven approach.

## IV - .NET Application

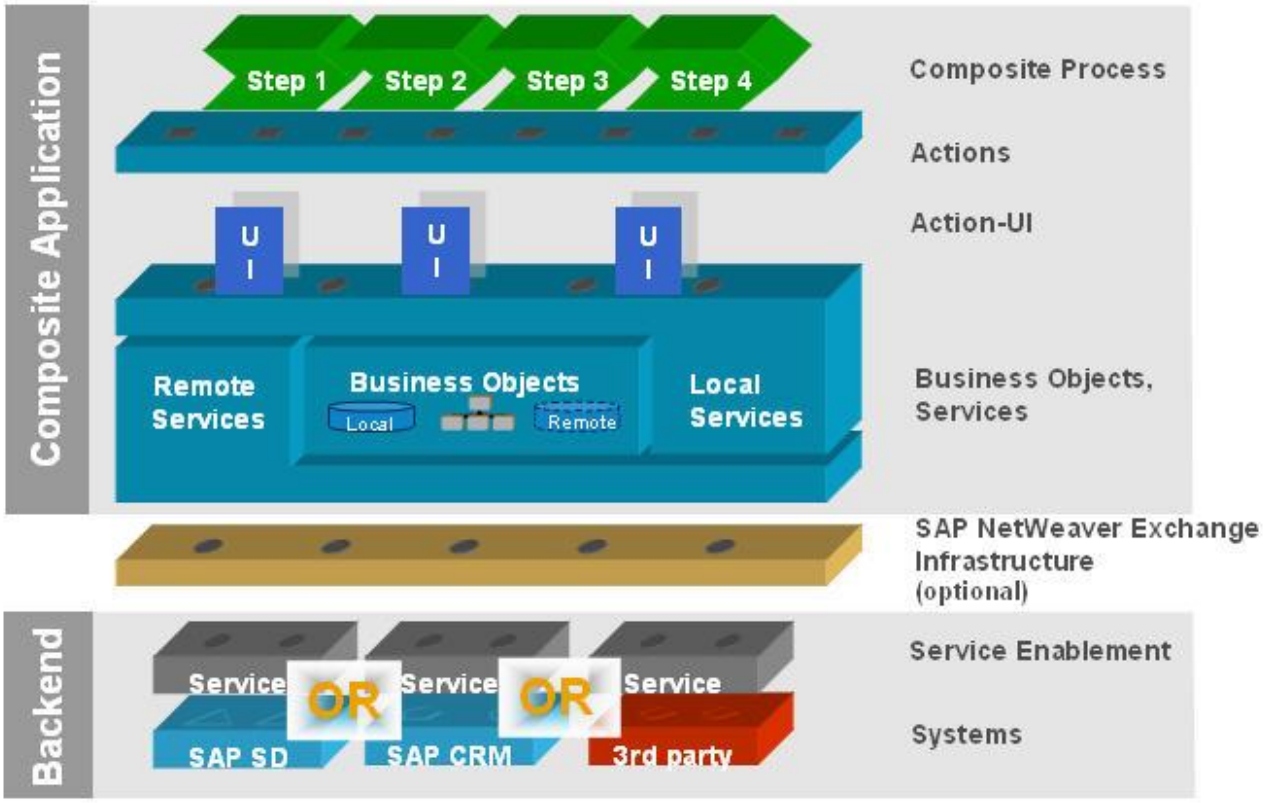



- **ISVs**
- **Intellectual property lies in application logic and integration to back-ends**
- **Main benefits: Time to market, developer productivity, application quality**
- **Expect SAP to deliver services**
- **No commitment to SAP NetWeaver**

This use-case covers the integration of Microsoft -based ISV applications into the SAP NetWeaver stack. Most of the time these solution already have appealing UIs that can be integrated into the Enterprise Portal with the help of the portal development kit for .NET. These UIs also need to be able to be included into processes covering steps backed by other technologies as well.

Further options are the integration of .Net based services via web services, the SAP NetWeaver Exchange Infrastructure component or the .NET connector.

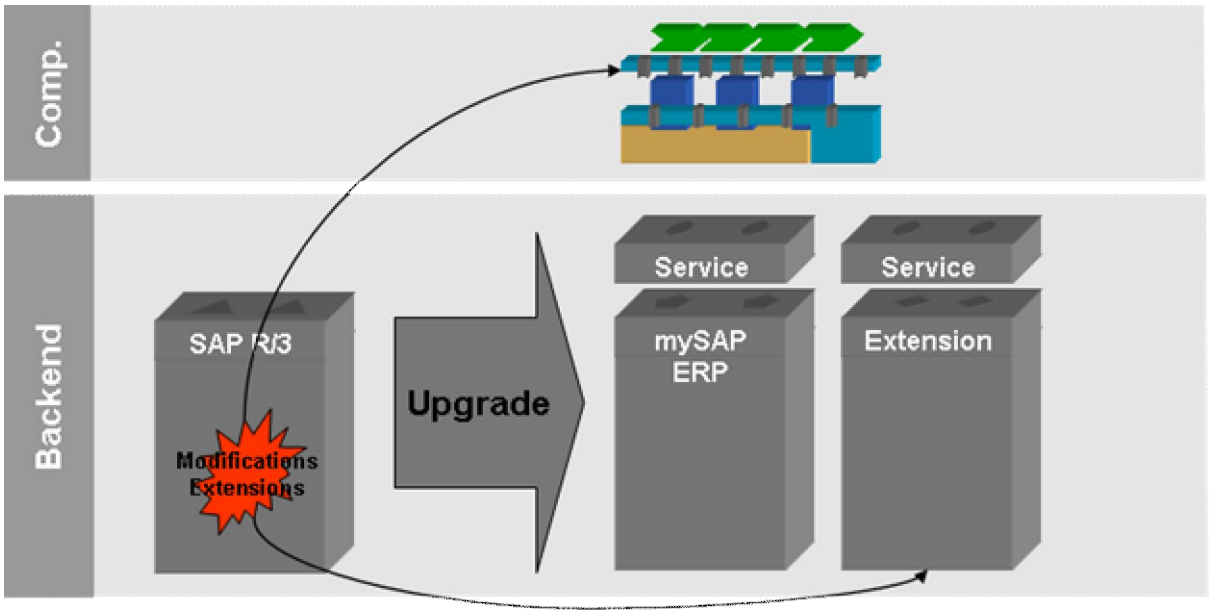
## V - Process Templates and Building Blocks




- **SIs**
- **Intellectual property lies in process and integration to back-ends**
- **Template instantiated at customer as part of service delivery**
- **Expect SAP to deliver services and composition platform**

In our view, mostly SIs will be interested in this use-case as the composition tools allow them to capture their existing integration and process knowledge into reusable templates that can easily be adapted to customer needs.

VI – „De-modification“




- **SIs, customers**
- **Replace modifications with components and composites**
- **Customer can/should configure process, workflow**
- **Expect SAP to deliver services and composition tool**

“De-modification” is a more speculative, still unproven use-case. The idea is to extract existing modifications that keep customers from upgrading and morph them into service-enabled extensions and composites that seamlessly integrate the existing functionality and the extensions.

## VII - Microsoft Office Integration

This use-case was proposed in the course of the discussions in the CAG CP.

It is unclear whether Microsoft Office should be another possible UI option for a step in a guided procedure or if it is to provide service-oriented functionality. Further clarification is needed.

# Feedback

The CAG CP members commented on the use-cases and also rated the use-cases for their relevance in the members' business. The rating ranged from 6 (very important) to 0 (not applicable) and sums have been built across companies to come to an overall number.

The original use-cases were not changed as no need for rework was expressed. The Microsoft Office integration use-case was proposed as a potential additional use-case during the face-to-face meeting in October 2006.

## Rating

The overall result is shown in the table below.

Condensing complex subjects into single figures is always prone to hurried interpretations. Therefore, it is highly recommended to carefully read the statements given by the CAG CP members below in addition to this ranking. Conversely, given the great diversity of partners in the group the ranking should be able to serve as an orientation guide on what a composition environment is used for, especially in the context of SAP NetWeaver.

| Use-case | Rating (sum) |
|---|---|
| II - Increased Use of SAP NetWeaver | 33 |
| III - Partner Application and UI Process | 31 |
| I - Yet Another JEE Platform for Application | 27 |
| V - Process Templates and Building Blocks | 22 |
| VII - Microsoft Office Business Application Platform | 17 |
| IV - .NET Application | 15 |
| VI – "De-modification" | 15 |

## Statements

This chapter summarizes the comments from the group members in the order of use-case prioritization.

### II - Increased Use of SAP NetWeaver

- This is an important use-case. After running our products on SAP NetWeaver, we can enrich our solutions with SAP-specific functionality and business content. The SAP Composite Application Framework (SAP CAF) tool is a very good candidate to help create new enterprise content management centric solutions.
- Development of solutions for an SAP ecosystem is one important business cases. The added value a SAP NetWeaver AS beyond "yet another" Java EE platform is the important point for us. It was the reason to use SAP NetWeaver 2004 Java for our solutions.
- Our dedicated focus is on SAP NetWeaver and also after more than 50 enterprise service-oriented architecture workshops conducted, we experience the increase in SAP NetWeaver adoption. Currently, our focus is on building composites and we have come out with a Composite Application Factory model for churning out composites.
- One of our products is built with the new development tools within the SAP NetWeaver landscape. It includes heavy usage of the Web Dynpro development environment, tight SAP portal integration,

usage of the SAP Internet Transaction Server to integrate SAP-based dynpros and software logistics based on the SAP NetWeaver Java development infrastructure. That product is designed for SAP NetWeaver and completes standard SAP modules. We are planning to build several additional products based on SAP NetWeaver for developer productivity and application quality reasons.

- Development of composites for cross-application solutions, such as plant maintenance or investment tracking.
- Currently we are evaluating such an increased use. JSR 168 support and Web Dynpro are interesting candidates. Managing business processes ("workflow engine") would be another.

## III - Partner Application and UI Process

- We are creating a SAP NetWeaver layer for enterprise resource planning (ERP) competitors in the small and medium business (SMB) space that have a large customer base but lack BI, portal and knowledge management technology layers.
- While offering partner applications is certainly a goal, pushing this business case depends on customer demand. At the moment, such demand for integral applications in the field of logistics gets obvious. Having Enterprise JavaBeans 3.0 applications, SAP NetWeaver AS is the right platform.
- Depending on our customers' requirements we often need the close integration of our own modules with other SAP modules and thus the processes go across SAP and (maybe) partner applications. Therefore, we are interested in composition tools to integrate our modules with the standard SAP functionality. In this scenario, SAP R/3® software is often used as financial backend.
- This is an important use-case. Our products expose their business value as Web services. With the help of SAP CAF, customer problems could by solved by composing SAP and our functionality into new process solutions.
- Development of partner/composite applications is our main use-case. In this case, we can get maximum benefit from the specific SAP NetWeaver AS features.
- It's acceptable if this is related to the adopting partner applications and providing services around that. Also, we are interested in joint composites development with partners.

## I - Yet Another JEE Platform for Application

- Customers with custom solutions and from a very different range of programming languages (such as. other Java 2 Enterprise Edition (J2EE) platform or Delphi, Progress, and so on). For some of our customers, we are migrating or creating new ones with SAP NetWeaver AS Java.
- Our JEE 5 applications running on SAP AS are a significant business case for us. Integrating into the SAP world is an emerging customer requirement.
- We are experienced in using Eclipse like many other vendors. A "standard" integrated development environment like Eclipse, in conjunction with SAP components, eases SAP application development.
- We have several J2EE-based products that would fit into the SAP NetWeaver platform. One of them was certified by SAP. We consider migrating and certifying some other products within the SAP NetWeaver landscape.
- This is the most important use-case for us. Many of our products rely on Java EE technology. It is important to run these products also on SAP NetWeaver.
- Development of solutions for an SAP ecosystem is one important business cases for us. Building just JEE5-compliant applications to be run anywhere is currently a minor use-case.

- Applicable as in our experience with SAP customers, they posses both SAP and non-SAP Java/J2EE home-grown applications. They would like to align to a single vendor – mostly SAP. In these cases, migrating to SAP NetWeaver is the preferred approach.

## V - Process Templates and Building Blocks

- Creation of micro verticals for SMB, such as agribusiness, banking, public cector, and son on where different processes flows from SAP standard business services and complementary software are combined.
- We would provide Building Blocks.
- Currently, we are evaluating a business scenario for the media industry that might be implemented using the SAP NetWeaver Portal component and SAP NetWeaver as a preconfigured template – ready-to-run, or adopted customer specifically in a very short period of time.
- This is an important use-case for us. Newly created products based on the SAP CAF tool (Use-case II) must be reusable and allow adjustment and combination for special customer needs. It will depend on the product if we will use the CAF business object layer.
- Provide own callable objects type. Building reusable components to use across composites.

## VII - Microsoft Office Business Application Platform

- No comments.

## IV - .NET Application

- A whole business for Duet™ software and office business applications integrated with SAP enterprise business services creating new business scenarios and workflows.
- This is an important use-case for us. For our .NET-based products we need SAP functionality exposed as web service and interoperability with .NET.
- We are investigating office integration scenarios that require .NET development.
- We will soon be starting a proof-of-concept build for Duet.

## VI – “De-modification”

- Architecture for customers’ upgrades to SAP ERP Central Component 6.0 leaving the SAP ERP standard separately from the Customer Custom Development
- We use various add-ins and user exits on the ABAP programming language. This is a very important feature to enrich the SAP solution with our functionality. It is not clear how SAP CAF could solve the problem to define and use in an effective way this extension points in ABAP applications.
- Unable to comment on the practical side though this use-case is required.

## Summary

The initial classification of use-cases, which was used as the starting point, covers the arena with the only new addition being “Microsoft Office Integration.”

Through this collaboration, a couple of suggestions can be derived:

1. As “Increased Use of SAP NetWeaver” is top priority, guidance is needed on how to use other portions of the stack in conjunction with composite applications. To achieve this, it makes probably sense to further detail this use-case into several integration scenarios that can be combined as required.
2. With “Partner Applications and UI Processes” ranking second, the comments on Duet and the .NET and office integration use-cases in mind, it is clear that streamlined integration of non-Java technologies into composite processes is required.
3. “Yet Another Java EE Platform” ranked third and is seen as the entry point for most non-SAP-savvy ISVs. We need to continue our focus on low-effort migration to the platform and lean consumption (simple to acquire, simple to deploy, and simple to use). With the support of J2EE 1.4 and Java EE 5.0, we need to ensure we further enhance the migration tools to support these standards, and help partners to fully leverage the ease of development that Java EE 5.0 offers.
4. “Process Templates and Building Blocks” implies that we also need reusable components that can be used as part of the process. These could be among others UIs, integration logic and business logic. The challenge is a creating a model that enables ISVs to efficiently sell these components to the community. Future developments in this area need to be closely monitored.
5. The “Demodification” use-case needs a real-life project as proof point, which is ideally done with an SI partner. The challenge here is the wide range of skills required on both the ABAP and the composite side.

Finally, we want to thank all contributors for their work and commitment. We are confident that we will continue the lively discussions on the other work streams of the Community Advisory Group Composition Platform.