Academic Chair in Business Intelligence

SAP

Context-aware Question Answering System for Mobile Business Users

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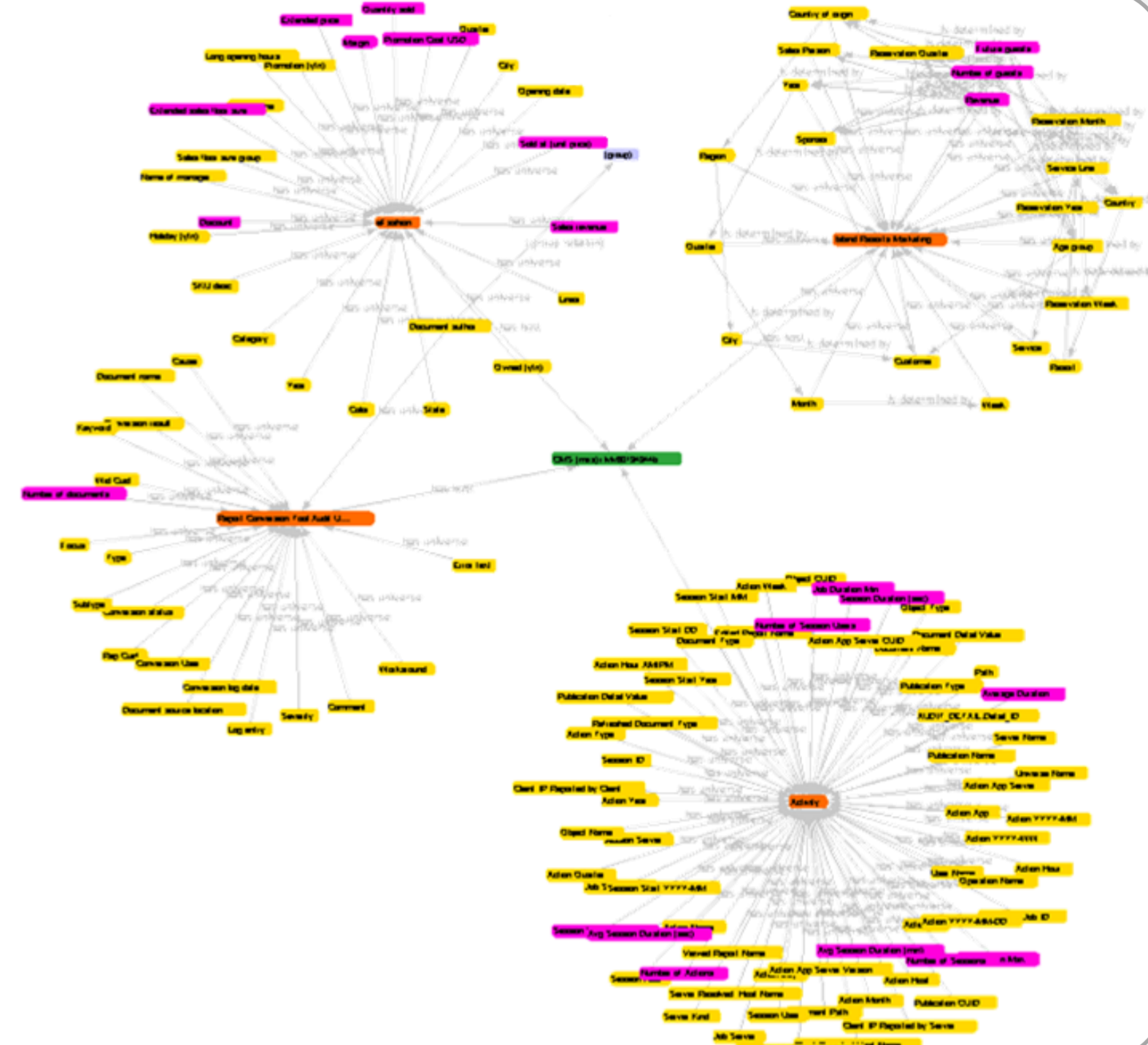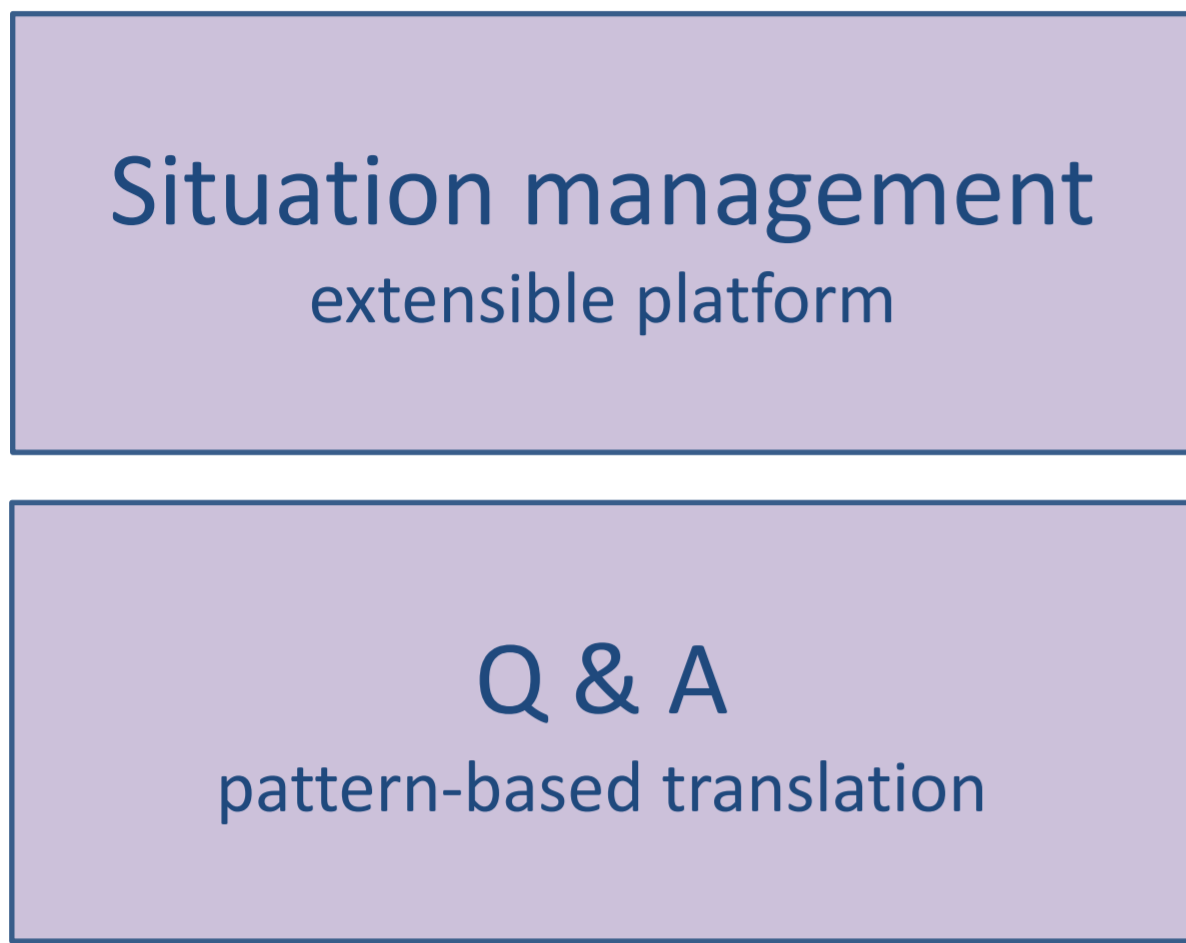*Marie-Aude Aufaure, MAS*

Motivation

Q&A systems aim at providing direct answers to questions expressed in NL
Such systems help end-users access Information which is for example stored in DW
NL is complex so a user situation model is often necessary to produce accurate answers

Situation management
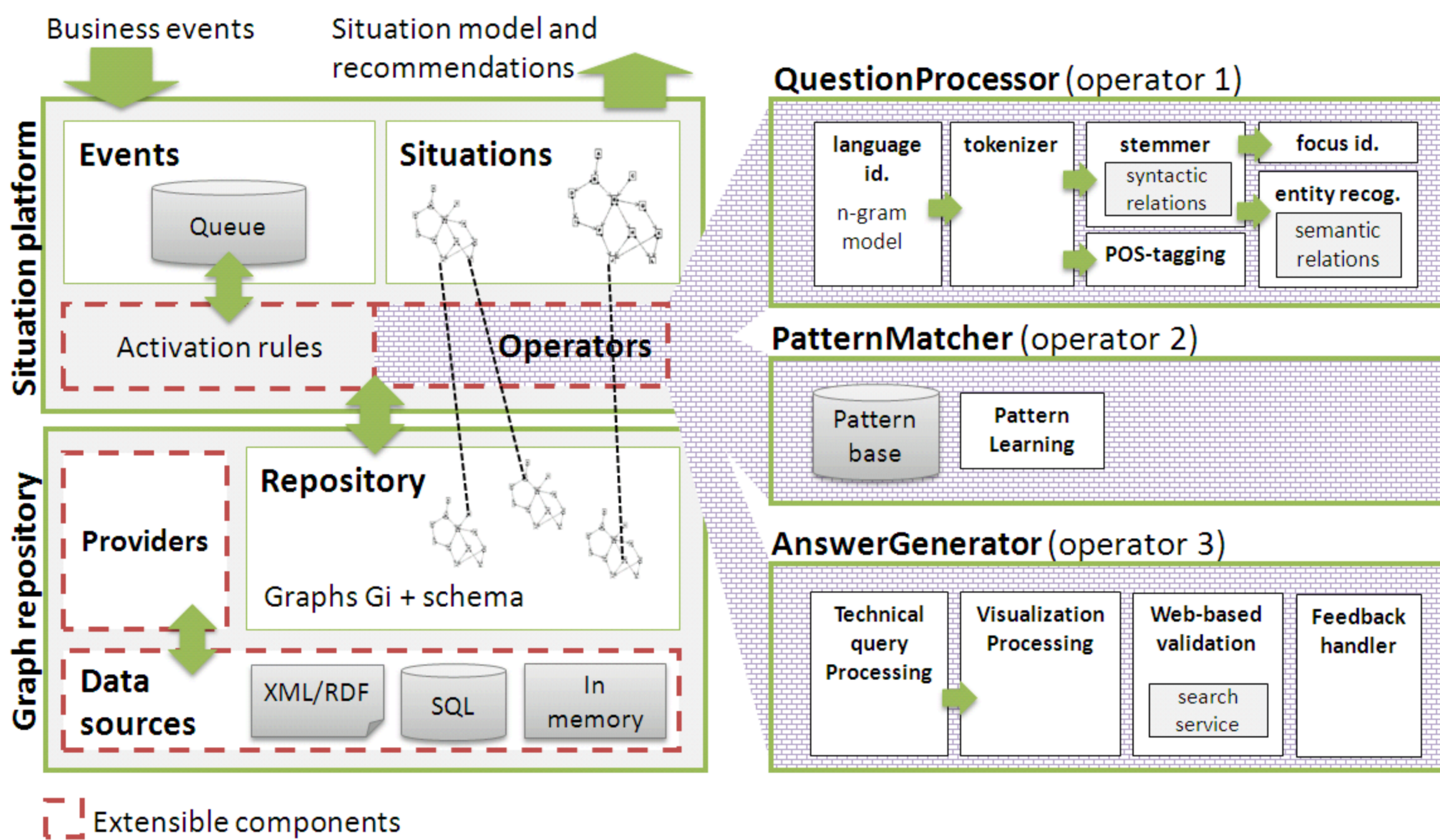extensible platform

Q & A
pattern-based translation

Integrated architecture

Questions are one type of events caught by the situation platform

Activation rules check that required components are available, and launch corresponding operators

Graph repository is composed of data from the data warehouse model as well as other sources (social network of users, ...)

Business events
Situation model and recommendations

Situation platform

Events
Queue

Situations

Activation rules

Operators

Graph repository

Providers

Repository
Graphs Gi + schema

Data sources
XML/RDF | SQL | In memory

Extensible components

QuestionProcessor (operator 1)

language id.
n-gram model

tokenizer

stemmer
syntactic relations

focus id.

entity recog.
semantic relations

POS-tagging

PatternMatcher (operator 2)

Pattern base | Pattern Learning

AnswerGenerator (operator 3)

Technical query Processing | Visualization Processing | Web-based validation
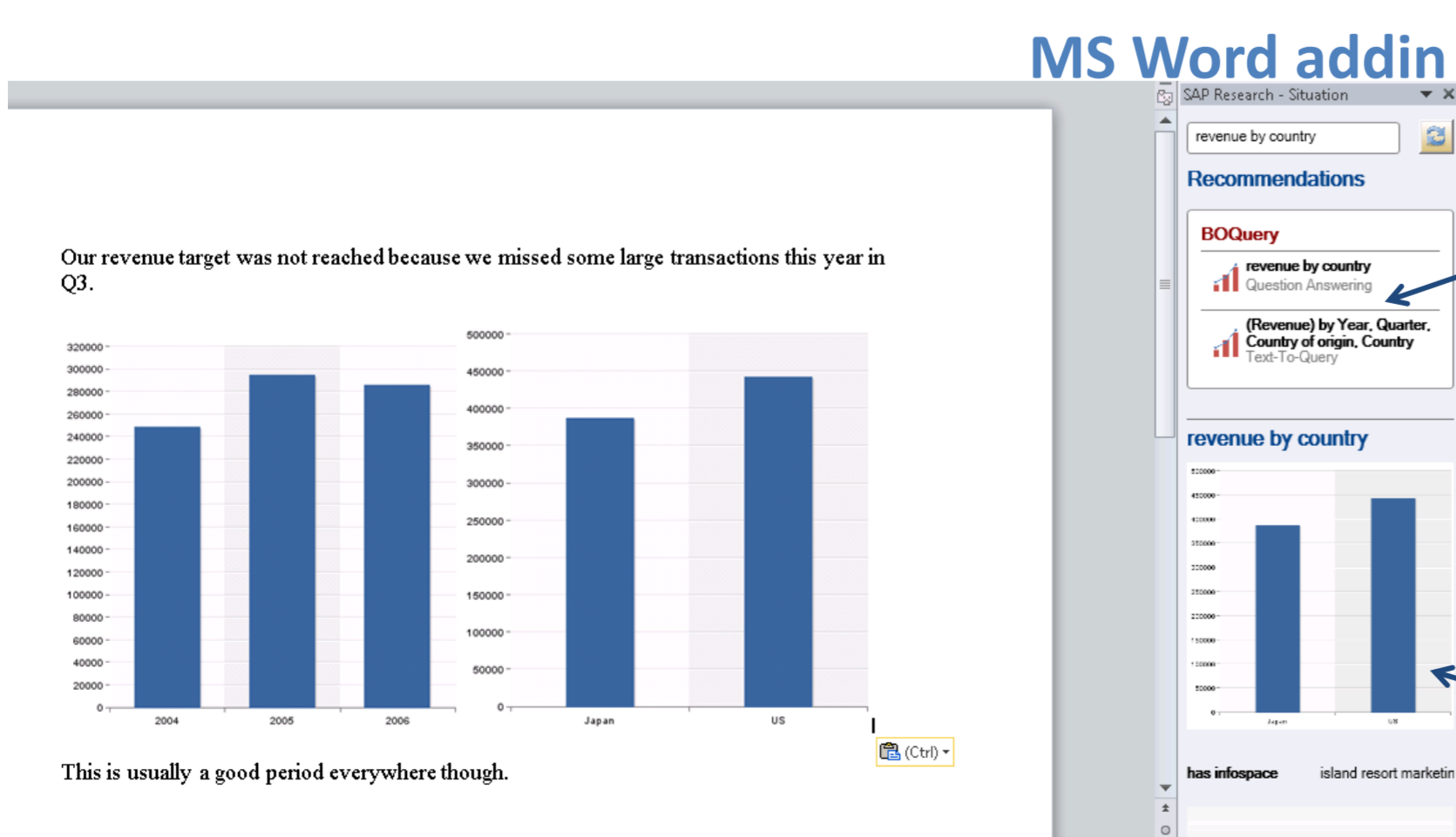search service | Feedback handler

Q&A processings implement a set of operators required to produce adapted answers

Q&A core component is based on linguistic patterns

Answers are composed of data sets and charts

Experiments

- Integration Q&A and situation management platform
- Context-aware recommendations
- Recommended items of different types
- Cross-platform/device shared situation

iPhone mobile Q&A application

MS Word addin

Our revenue target was not reached because we missed some large transactions this year in Q3.

This is usually a good period everywhere though.

list of recommendations

details of one recommendation

Carrier 4:54 PM
MOQA **Recommendations**
What is the recent sales revenue
BOQuery
Sales revenue in 2010
Q&A
Sales revenue
Q&A
Sales revenue in France in 2010
Q&A

Carrier 5:09 PM
Recommendations **Details**
Sales revenue in 2010

2010 (22.25 %)
2008 (41.39 %)
2009 (36.37 %)

Year	Sales revenue
2008	41.39 % $[$15,059,143]
2009	36.37 % $[$13,232,246]
2010	22.25 % $[$8,095,814]
Total (3)	$36,387,203