

B/S/H/

# Visualization of Enterprise Architecture Model Evolution Based on an Example in the Consumer Goods Industry

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## Agenda

- Introduction
- Research Questions
- Integration Approach
- Technical Approach
- Results
- Future Improvement
- Conclusion

## INTRODUCTION



### Bosch and Siemens Home Appliances(BSH)

- BSH is a well known home appliances company
  - More than 45000 (by 2011) employees with 14 different brands operating in 40 countries.
  - Has huge amount of technology and systems and complex environment
  - Has Enterprise Architecture (EA) management to control and manage their environment
- BSH IT has an EA Management system in place
- Decide to have a collaboration by master thesis with the goal to see if:
  - TUM research could improve BSH IT EA management and visualization

## Initial State

ATLAS	TRICIA
<ul style="list-style-type: none"><li>• EA Management took place in BSH since 2006</li><li>• Since 2007 BSH IT is using a system called Atlas</li><li>• It is very good product with a well mature maintenance process.<ul style="list-style-type: none"><li>• Filled up by the product managers</li><li>• It is used to represent and making reports about the IT-Systems of BSH</li><li>• Used to visualize the reports and represent the current status of the enterprise</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Sebis developed a cutting-edge tool named “Tricia” which may offer new approaches and visualization possibilities</li><li>• Enterprise 2.0 product with many different features and development areas</li></ul>



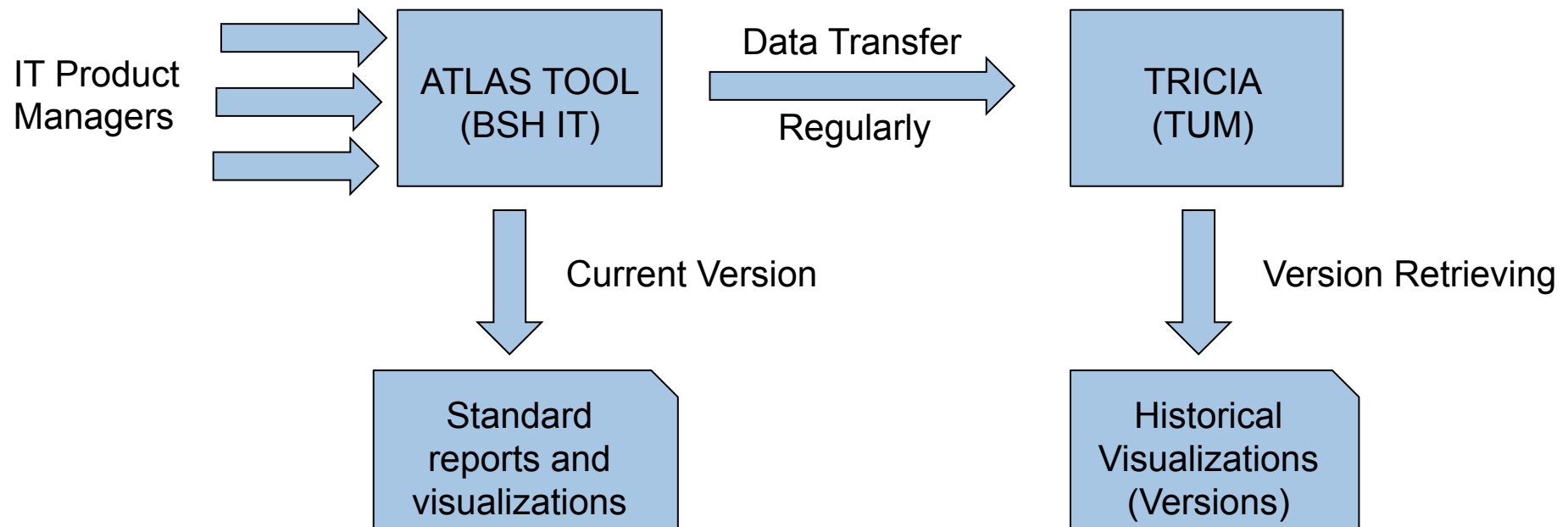
- However the Atlas system has some limitations concerning comparison of historical and actual data
- TUM Research together with the tool Tricia may have the potential to improve BSH EA approach

## Research Questions

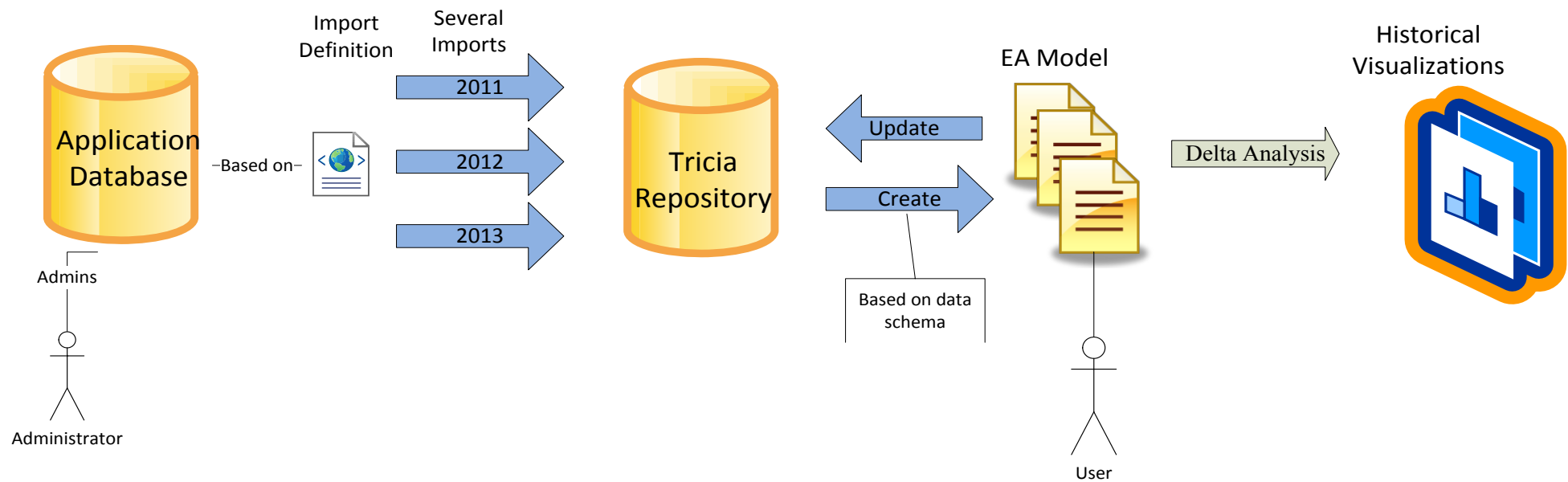
- What are the stakeholder requirements for visual EA model analysis and evaluation?
  - Approach
    - Initial interview
    - Constant observations and interviews inside the enterprise
- Which (EA) visualizations can effectively show temporal aspects of (EA) models?
  - Approach
    - Comprehensive literature research
    - Mapping of research results to requirement
    - Prototype implementations, evaluated with real business data
- How to handle previous states of EA in a model repository and visualize them?
  - Approach
    - Enhancement of Tricia to be able to
      - Handle different states of an EA models and
      - Visualize different EA models
- How to combine the existing Atlas solution with Tricia?

## BSH Logical Integration Approach

- There will be new approach in BSH IT
  - BSH will use both systems at the same time for different purposes
  - Atlas → Data maintenance and standard visualizations
  - Tricia → Historic data comparison by visualizations

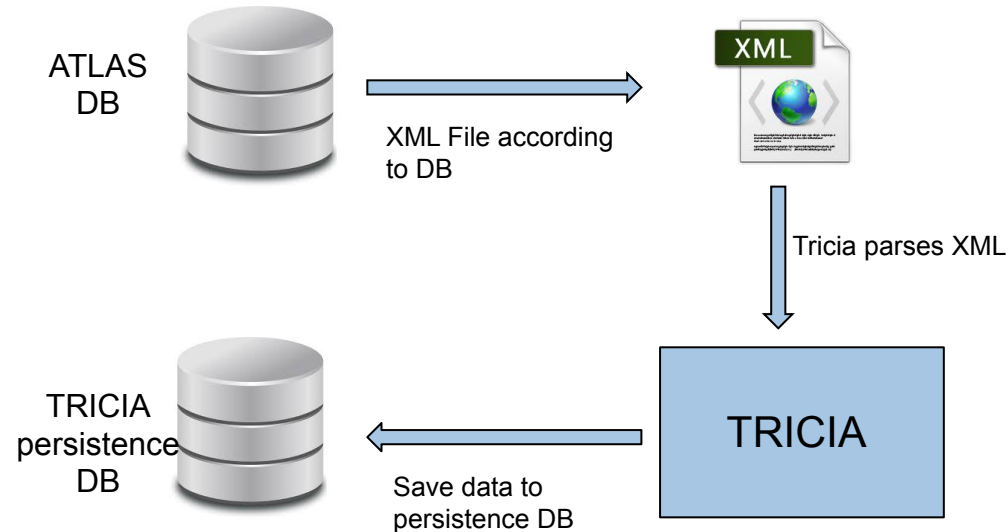


## Technical Approach



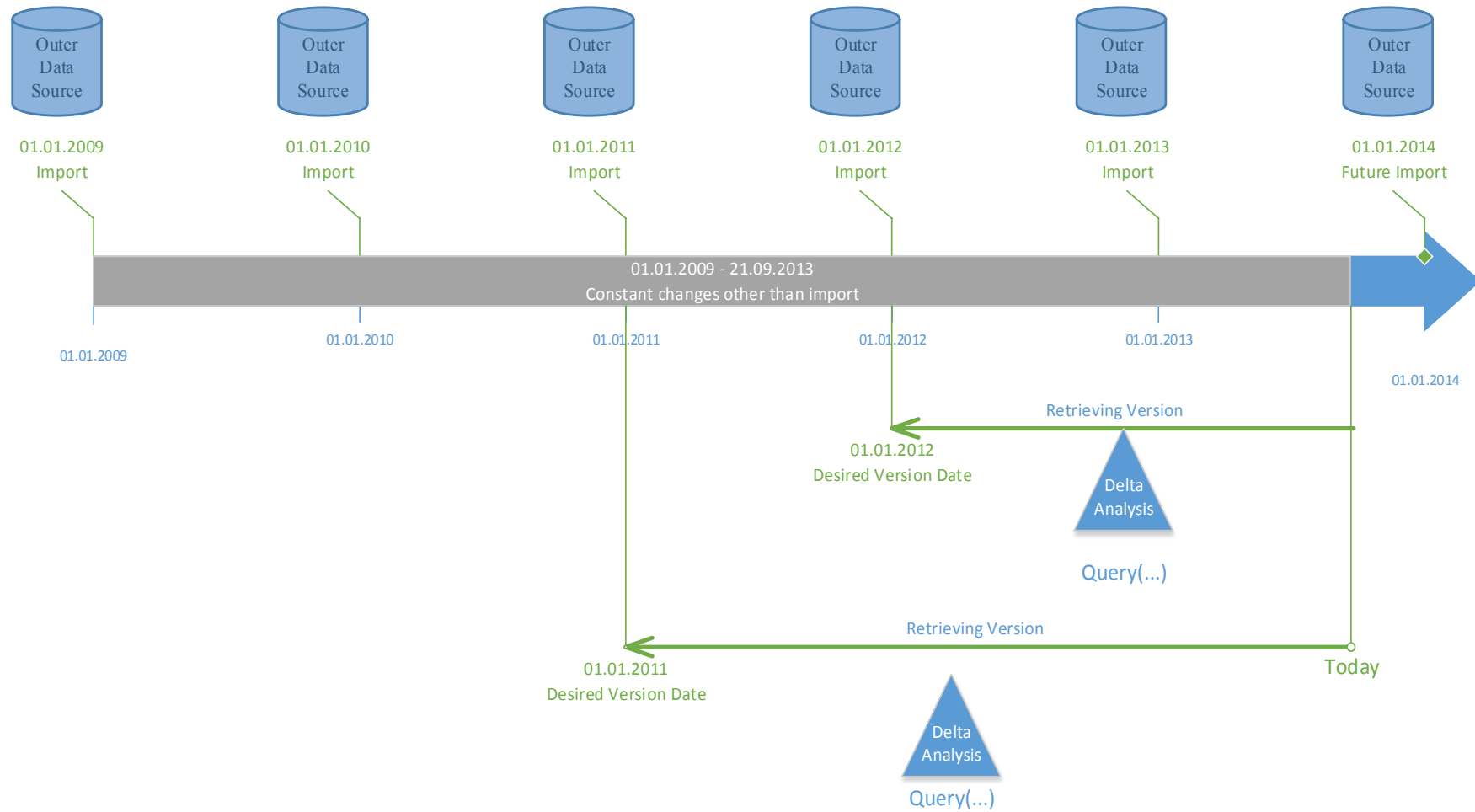
## Data Import

- Tricia tool enables users to have an automatic transfer of their data.
  - Mapping file prepared to transfer entities and relations from Atlas to Tricia
  - Modification of import mechanism to be able to deal with regularly imports
    - Writable Copy
    - Versionable Mixin



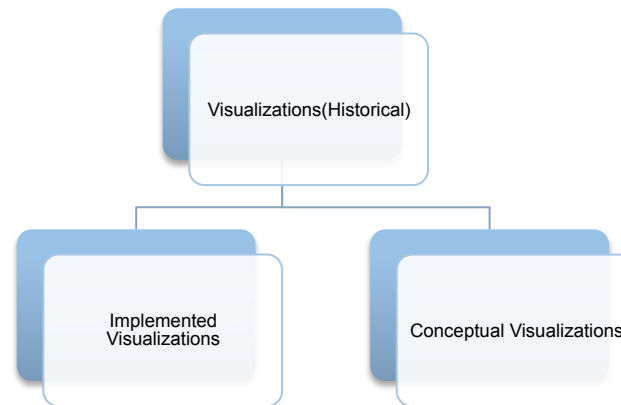


## Version Retrieving



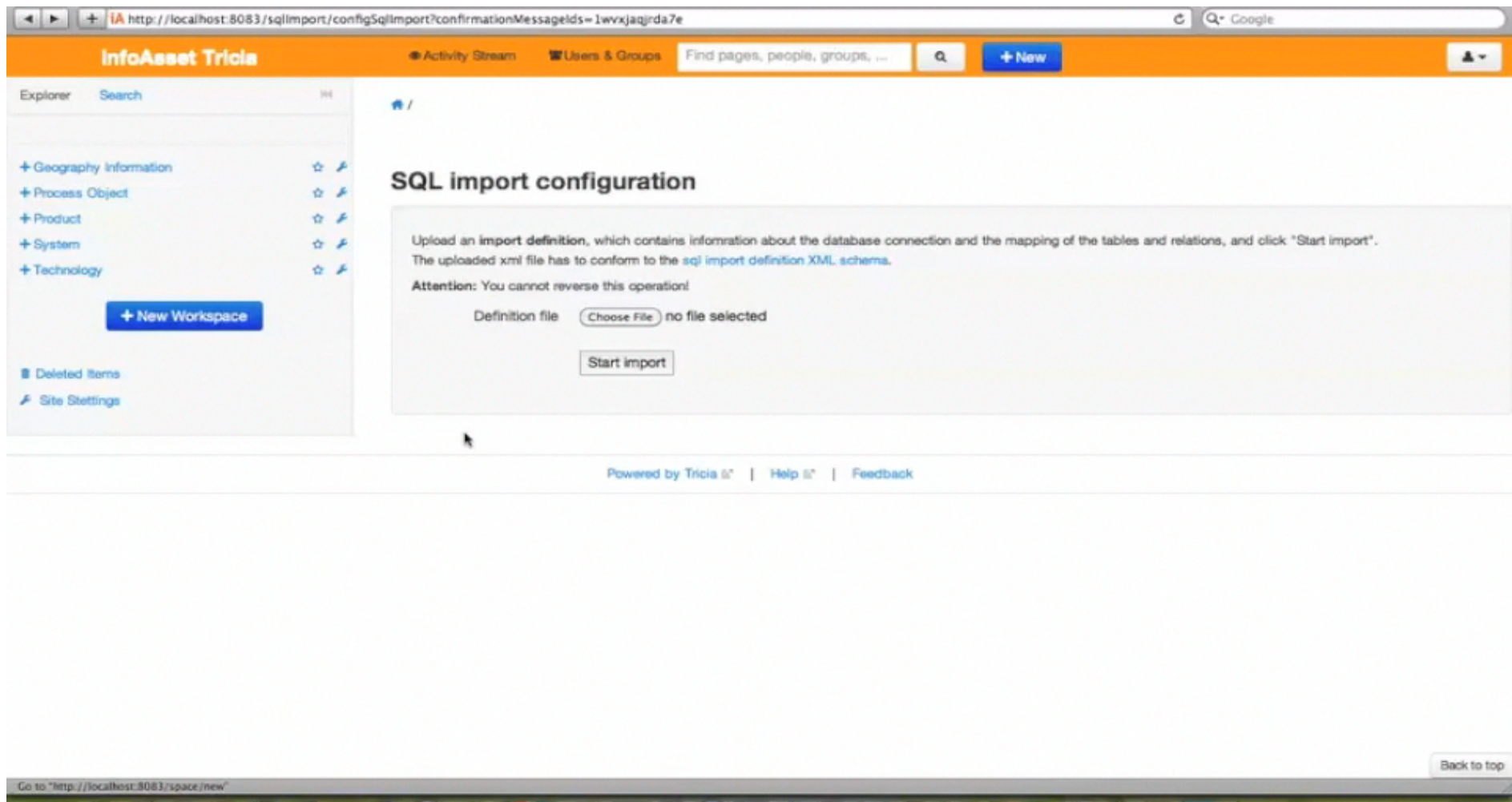
## Visualizations

- There are two types of visualizations prepared in the context of master thesis



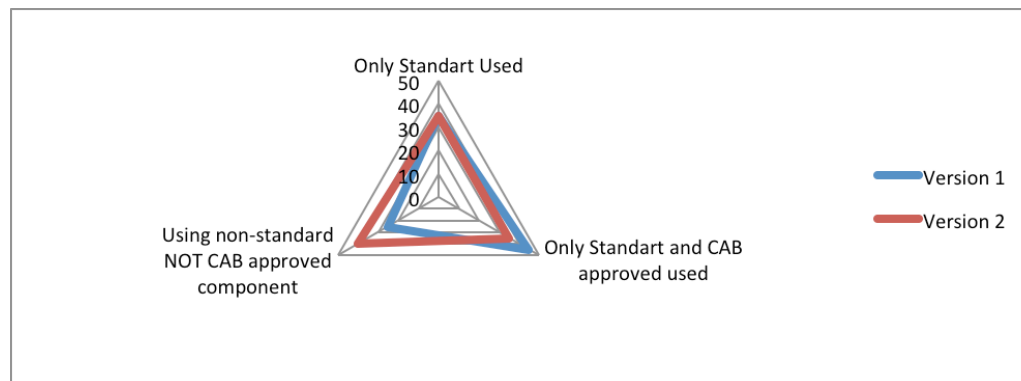
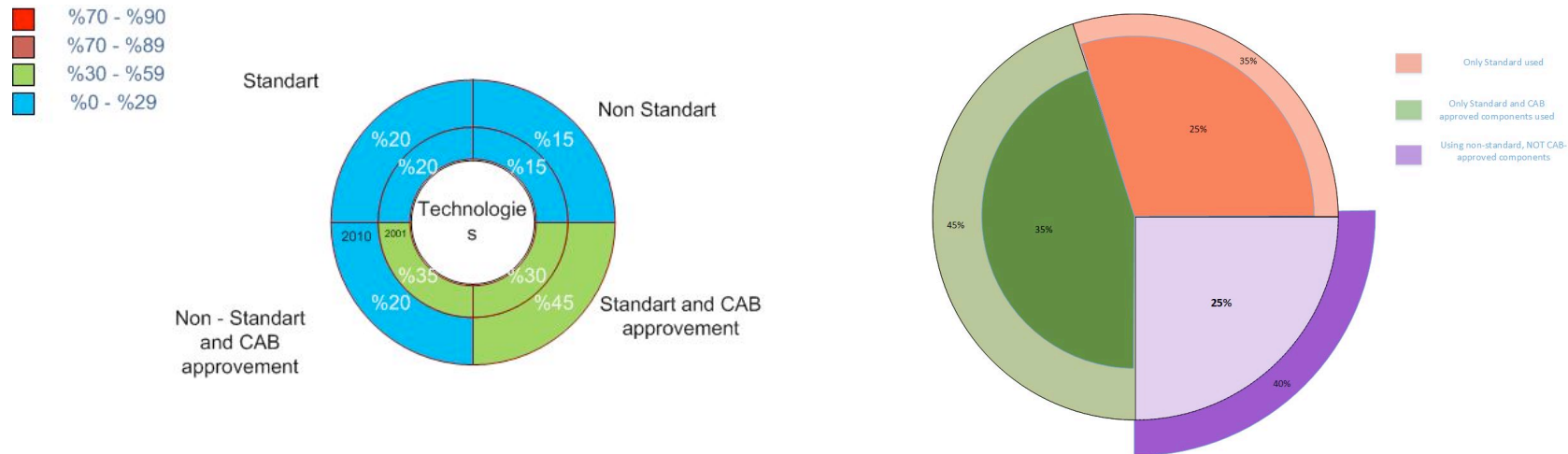
- Mostly relies on the real enterprise data
- Result of practical evaluation
- Using well known visualization types improves understanding of content significantly

## Visualizations - DEMO



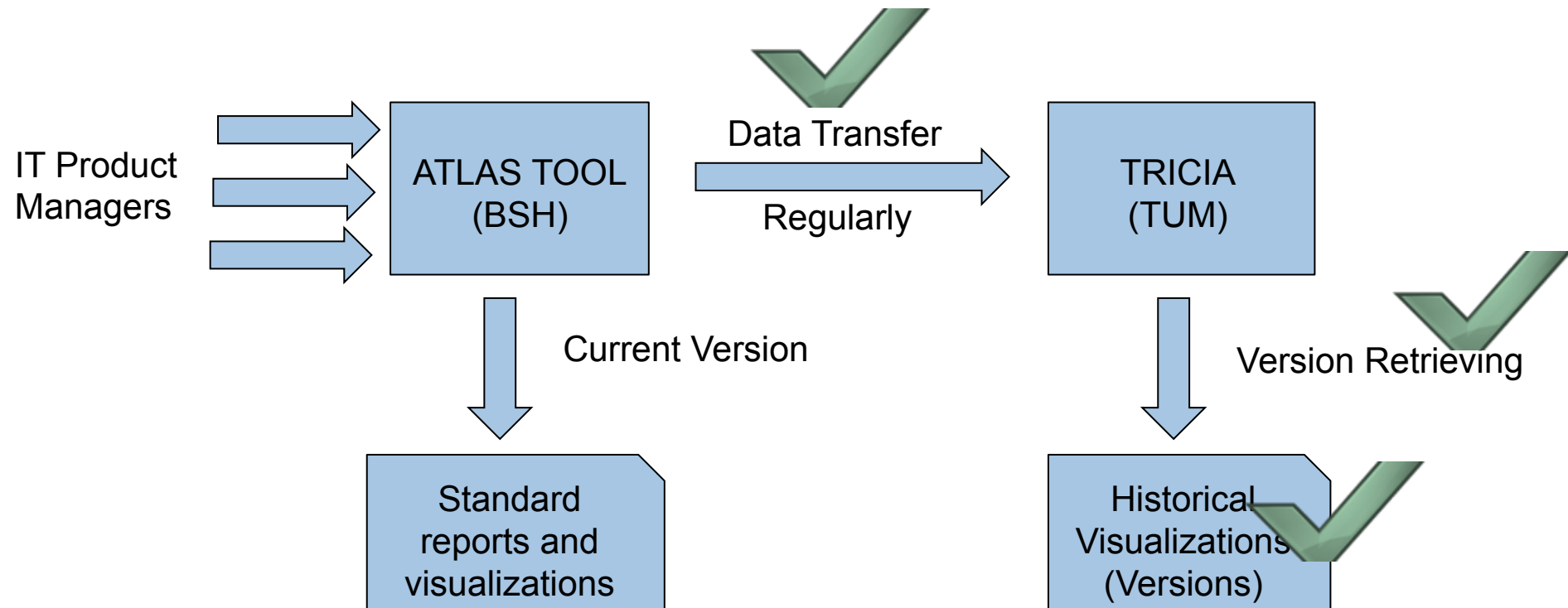


## Conceptualized Visualizations - 2



## RESULTS

- All the objectives that were determined at the beginning has accomplished and evaluated



## Further Improvements

- Implementation of conceptualized visualizations
- Performance Improvements for Import mechanism
- Design of the current visualization can be improved
- Documentation of the Tricia should be definitely improved for business perspectives
- Different states can be stored in EA repository

**THANK YOU FOR YOUR ATTENTION !**

**QUESTIONS & COMMENTS ?**

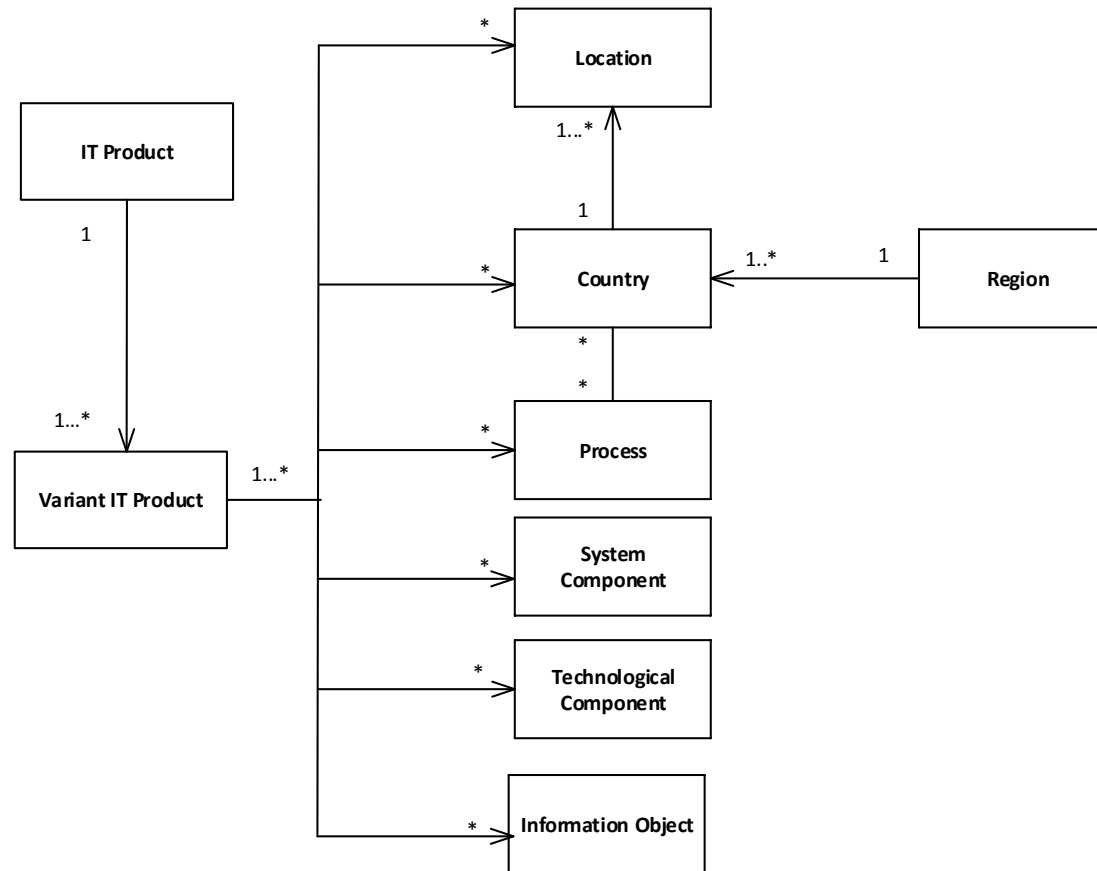


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## **Backup Slides**

## BSH Data Model



## Data Import – Copy Asset

- Data import should ensure regular data transfer

