

Management of Digital Content in Business Environments

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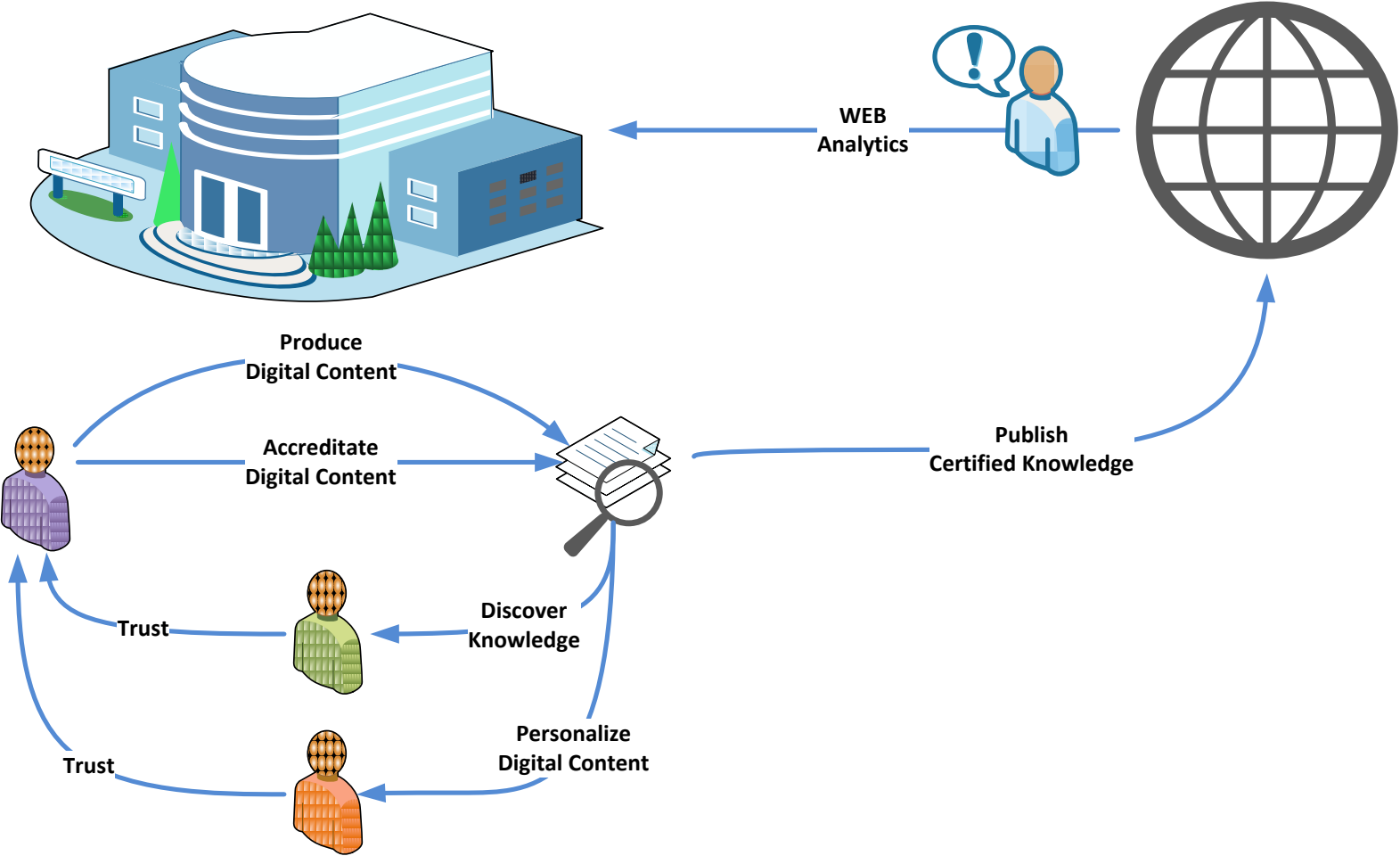
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NCSR “Demokritos”



Improving the efficiency of Enterprises and Organizations, 19/12/2012

From Digital Content to Business Intelligence



From Digital Content to Business Intelligence

People in Organizations produce Knowledge

Open Issues:

- 1) How this knowledge can be shared / customized for the needs of others within the organization ?
- 2) How this knowledge can be certified in / out of the organizational environment?
- 3) How knowledge produced outside of the organization (e.g. WEB) can be used within the organization?



Knowledge Discovery

Problem: Discover relevant knowledge from digital content

Relevant Technologies:

- Knowledge Representation
- Information Extraction
- Personalization



Technology: Knowledge Representation

- **Ontological Representations**
 - Formal, machine-readable, inferenceable representation
 - Ontology Authoring
 - ELEON Authoring Tool, NOMAD Model Authoring Module
 - Ontology Learning & Coordination
 - BOEMIE, ONTOSUM projects
- **Metadata Management**
 - Produce consistent, adequate descriptions
 - Align, Consolidate & Curate metadata collections
 - SemaGrow EU project



Technology: Information Extraction

- Clustering

- Which entities belong together?
- *BOEMIE, SYNC3*

- Classification

- Where does something belong?
- *SYNC3, NOMAD*

- Extraction

- What can I learn about an entity?
- *BOEMIE, MediEQ, NOMAD*

- Summarization

- Can I review information in a concise, dense manner?
- *OntoSum, NOMAD*



Technology: Personalization

- User modeling
 - Which are the different possible profiles of users/ customers?
 - *P-Server*
- Personalization
 - Can I deliver information that is interesting to the user?
 - Can I present it in the manner that the user prefers?
 - *SERVIVE, INDIGO, C2Learn*



Certifying Knowledge

Problem: Creating Trust Certifications for the Knowledge

Relevant Technologies:

- Digital Signatures
(for sharing within the Organizational Environment)
- Quality Labels (Trust-marks)
(for sharing in a larger scale)



Technology: Quality Labeling

- Can I have information about the quality of a resource?
- Can I find this information easily? (e.g. while searching the web, while visiting a web site)
- Can I express my own opinion on the quality of a resource?
- Machine-readable, accredited resource descriptions
 - QUATRO, MedIEQ and QUATRO+
 - POWDER W3C Recommendation



Business Intelligence

Problem: Capitalizing on WEB Knowledge

(for product design, strategic planning etc.)

Relevant Technologies: *WEB Analytics*

- **Event Recognition**

(discovering critical events, transform data into operational knowledge)

- **Sentiment Analysis**

(understanding public stance)

- **Buzz Detection**

(identify dominant trends)



Technology: Event Recognition

Information Gap

- Structured and unstructured data from various sources using ICT
- Missing capability to fully utilize available data

Intelligent Resource Management (IRM)

- Resource management for complex operations with involvement of humans and equipment
- Complexity of operations increases
- Assisting intelligent tools for handling the complexity and for improving decision-making

Event recognition is the key to close the gap between data collection and operational knowledge



Technology: Sentiment Analysis

- Discovering Opinions on People, Products, Events
- Determining the Polarity of the discovered opinions
- i-sieve
- gov.insight platform
- SYNC3, NOMAD

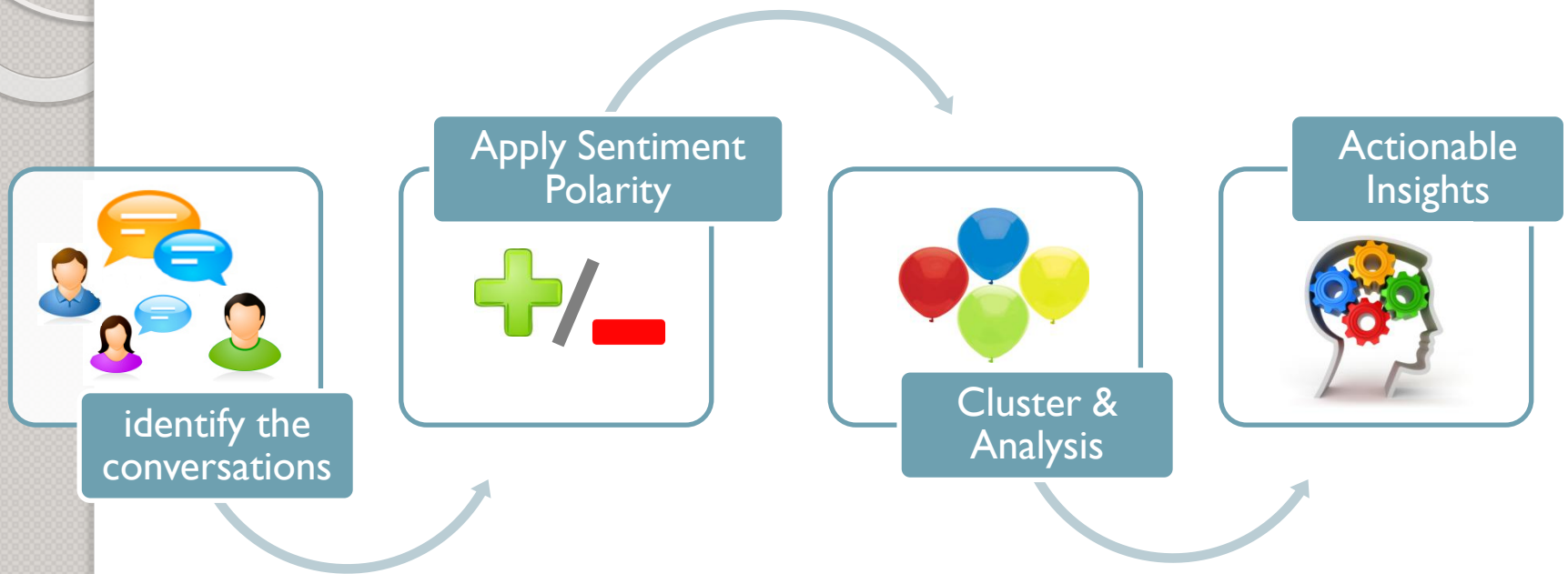


Technology: Buzz Detection

- Which are the main topics of discussions?
- Which are the most important aspects?
- Who are most involved?
- Who are the trend-setters?



i-sieve Technologies **Buzzsense**: online analytics service providing total brand exposure monitoring solutions for brands

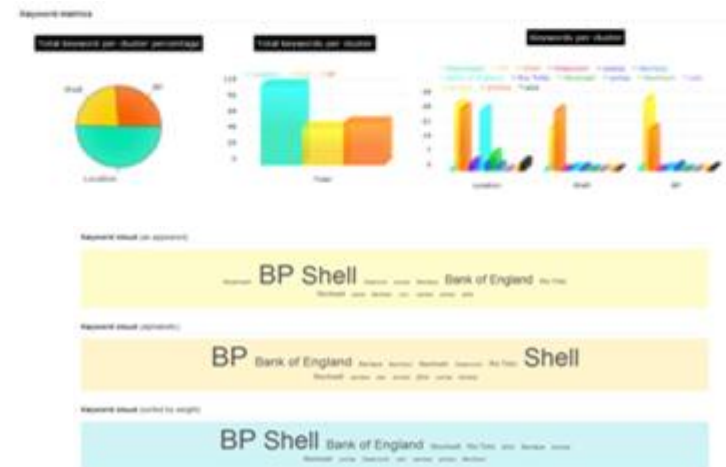
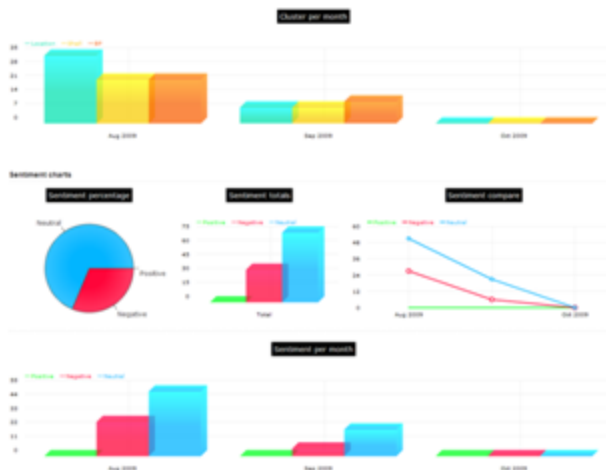
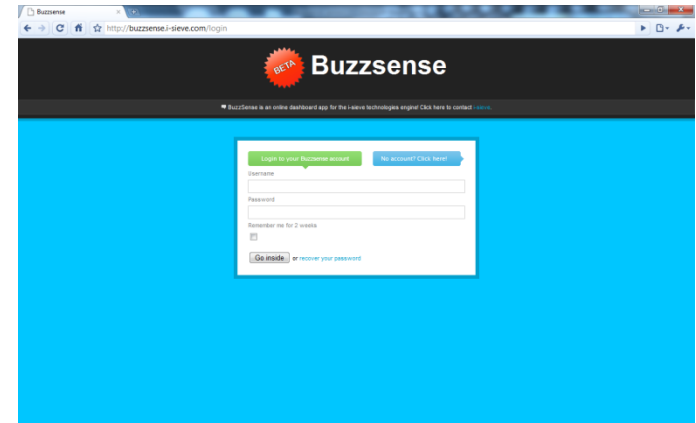


Normalization of simple mention measurements into meaningful insights on the sentiment polarity of the content, the paths and patterns of content spreading, as well as estimate the size of the audience the content is reaching.



Reporting and Online Dashboard

- ❑ Reporting Output and frequency can be tailored by brief
- ❑ Dashboard Access enables users to view updated results on a daily basis



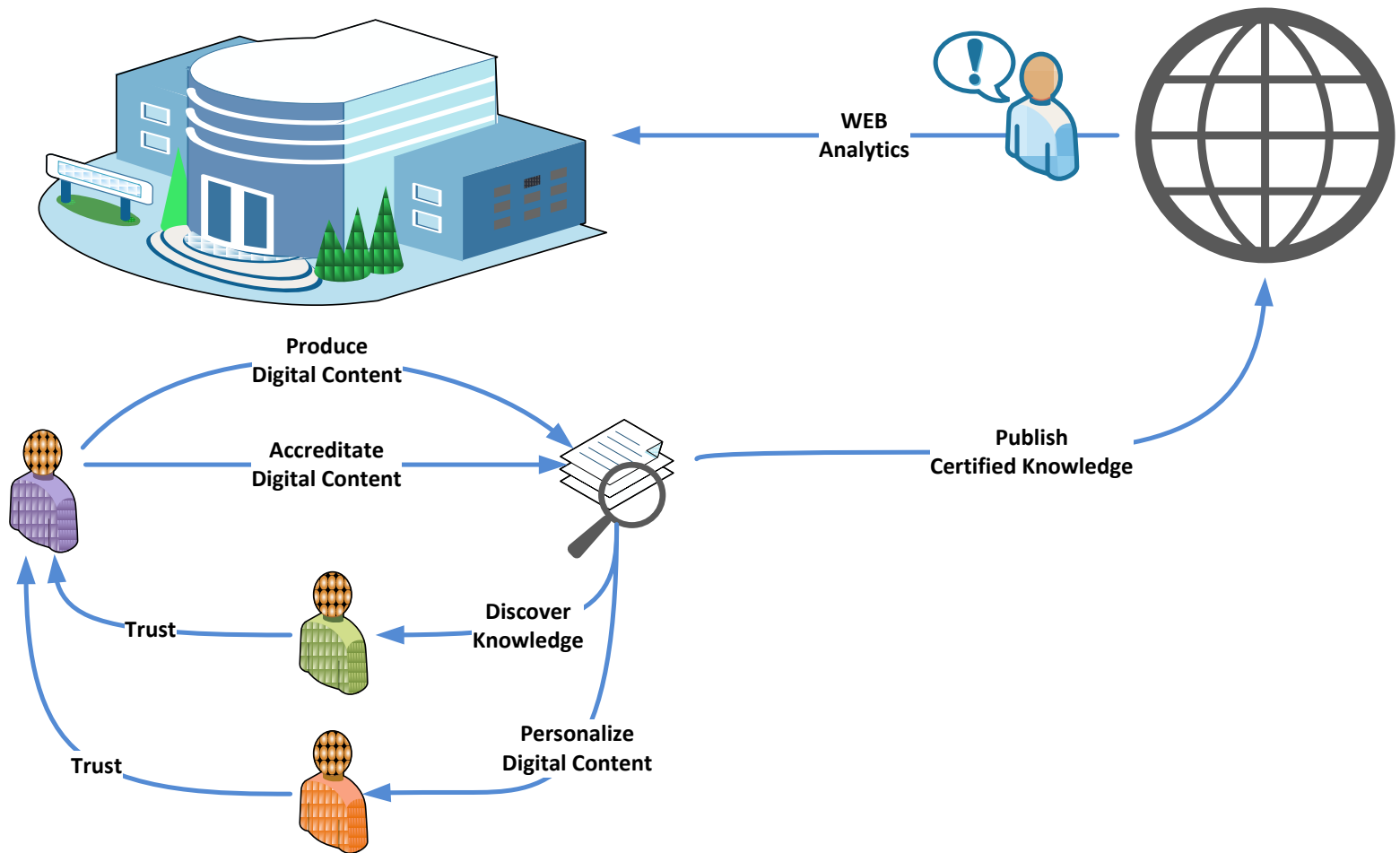
i-sieve credentials



The Coca-Cola Company



From Digital Content to Business Intelligence



Thank You!

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Technology: Event Recognition

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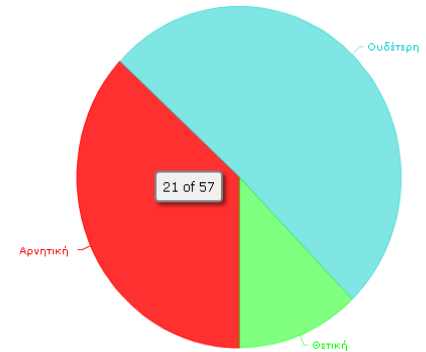
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<http://gov.insight.iit.demokritos.gr/>

What do users believe about an article?

Αριθμός θετικών, αρνητικών και ουδέτερων απόψεων στο άρθρο.



Which article stimulated most involvement/discussion?

Σχόλια ανά άρθρο

