Cooking with Semantic Web

sharing and managing knowledge in Food Science

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AGROTECHNOLOGY & FOOD SCIENCES GROUP
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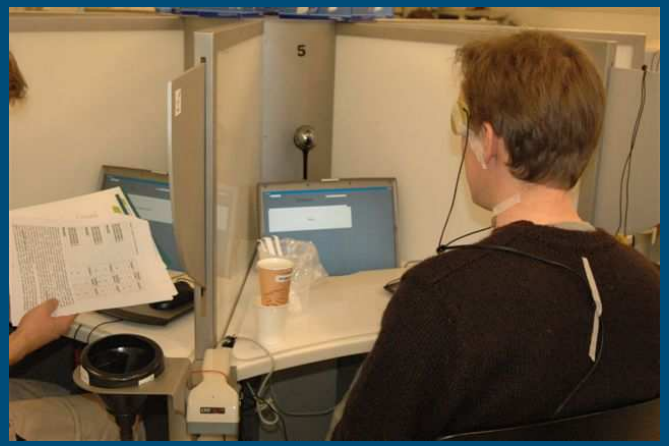
Our Focus

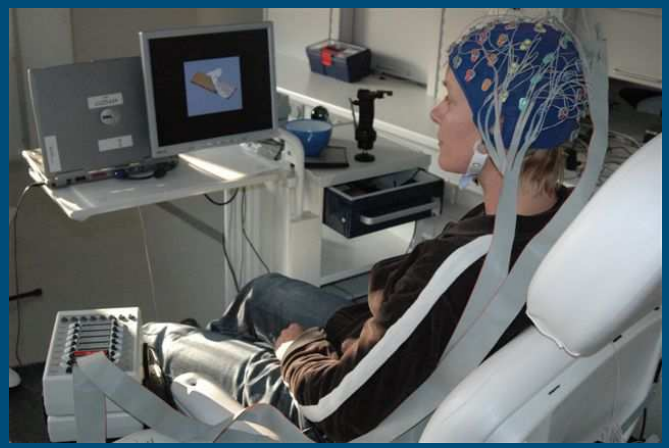
- Organisational aspects of knowledge sharing
  - fostering collaboration between knowledge workers
  - finding and removing (social or technical) obstacles to knowledge sharing
- Knowledge modeling
  - Building and reusing taxonomies, ontologies, thesauri for expert domains
- Knowledge intensive (web) applications
  - help users store, find, share, and reproduce relevant information

Semantic Web at AFSG

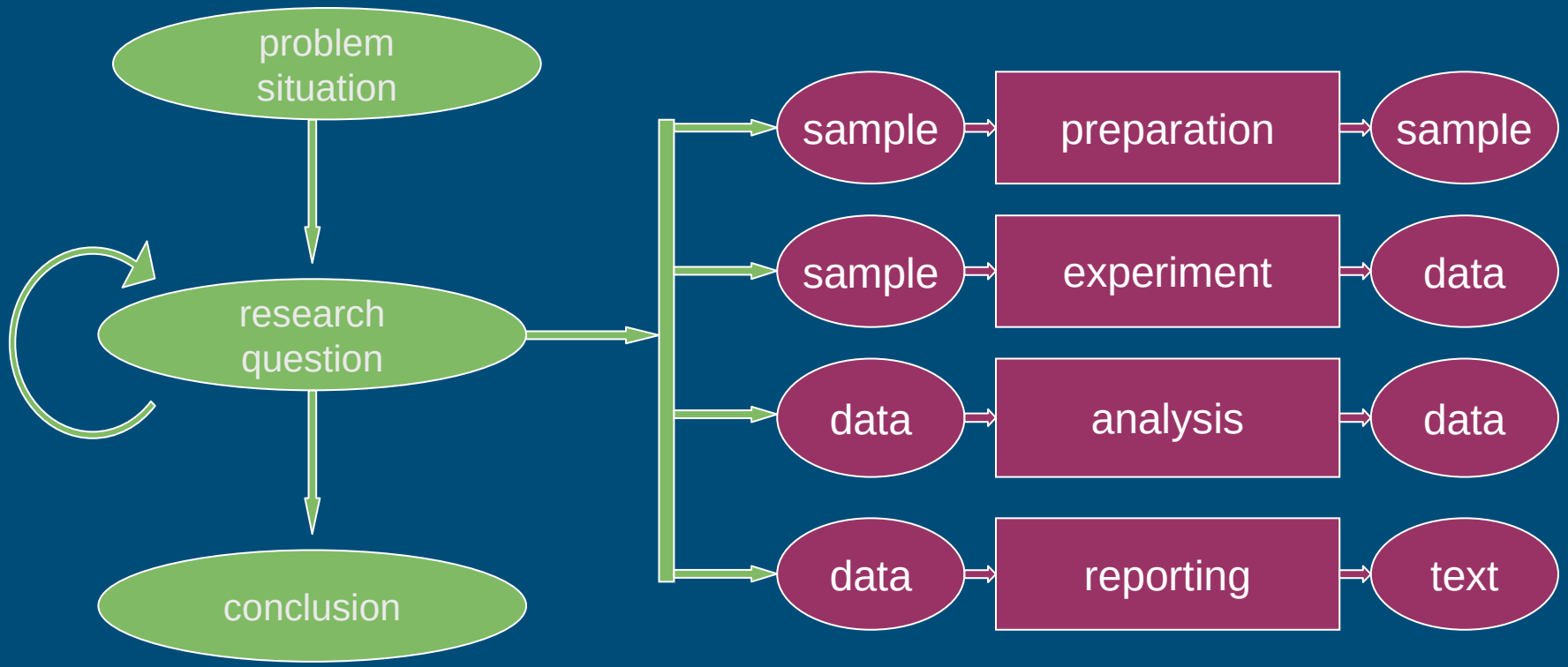
- AFSG develops knowledge-intensive applications in the domains of food production, logistics, and food research
- Use of SW technology provides many advantages for these projects
  - knowledge capture
  - reuse of vocabulary and models
  - adaptability of models in running systems

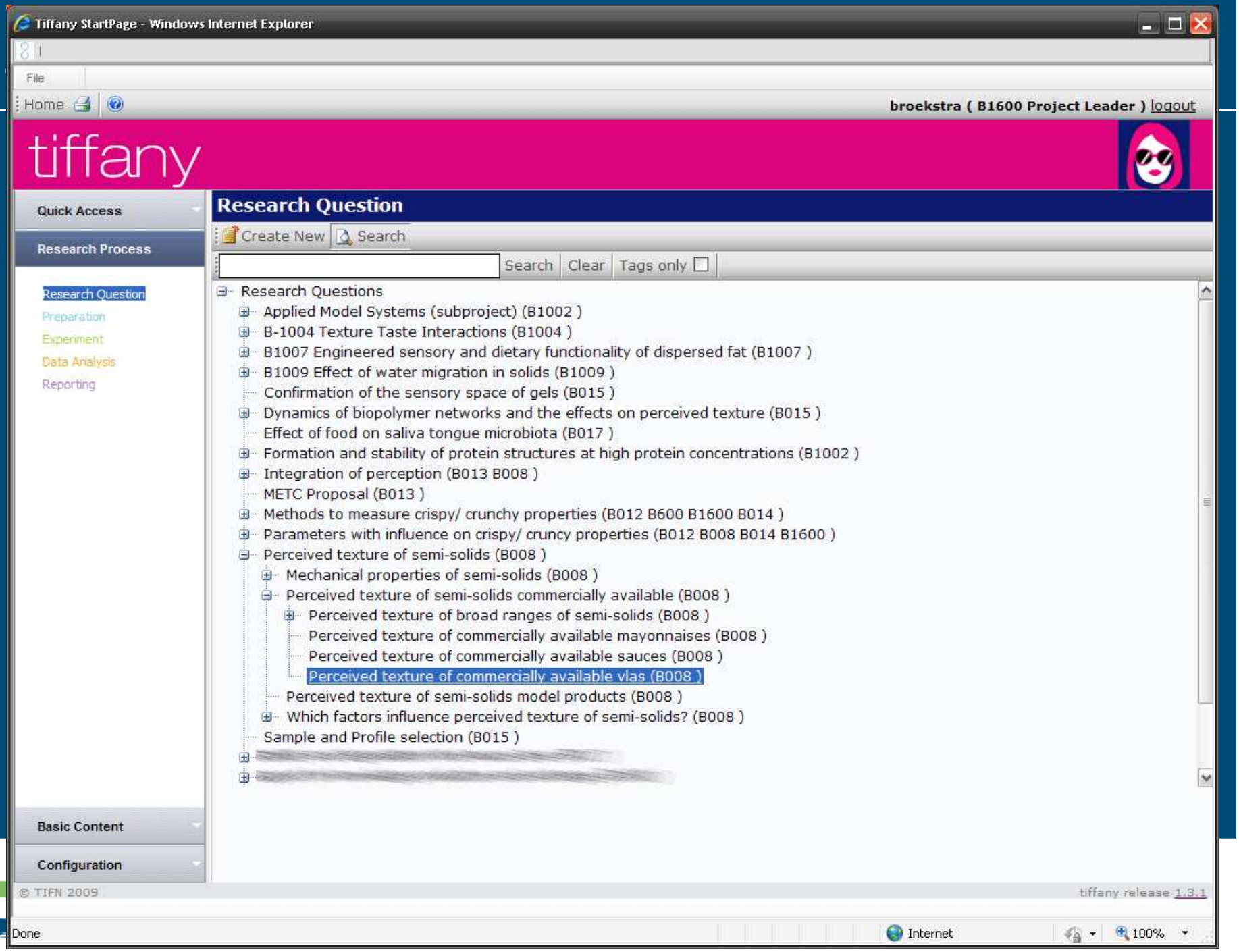
TI Food & Nutrition





Research model Tiffany




Tiffany StartPage - Windows Internet Explorer
File
Home
broekstra (B1600 Project Leader) logout
tiffany
Quick Access
Research Process
Research Question
Preparation
Experiment
Data Analysis
Reporting
Basic Content
Configuration
Research Question
Create New
Search
Search
Clear
Tags only
Research Questions
Applied Model Systems (subproject) (B1002)
B-1004 Texture Taste Interactions (B1004)
B1007 Engineered sensory and dietary functionality of dispersed fat (B1007)
B1009 Effect of water migration in solids (B1009)
Confirmation of the sensory space of gels (B015)
Dynamics of biopolymer networks and the effects on perceived texture (B015)
Effect of food on saliva tongue microbiota (B017)
Formation and stability of protein structures at high protein concentrations (B1002)
Integration of perception (B013 B008)
METC Proposal (B013)
Methods to measure crispy/ crunchy properties (B012 B600 B1600 B014)
Parameters with influence on crispy/ cruncy properties (B012 B008 B014 B1600)
Perceived texture of semi-solids (B008)
Mechanical properties of semi-solids (B008)
Perceived texture of semi-solids commercially available (B008)
Perceived texture of broad ranges of semi-solids (B008)
Perceived texture of commercially available mayonnaises (B008)
Perceived texture of commercially available sauces (B008)
Perceived texture of commercially available vlas (B008)
Perceived texture of semi-solids model products (B008)
Which factors influence perceived texture of semi-solids? (B008)
Sample and Profile selection (B015)
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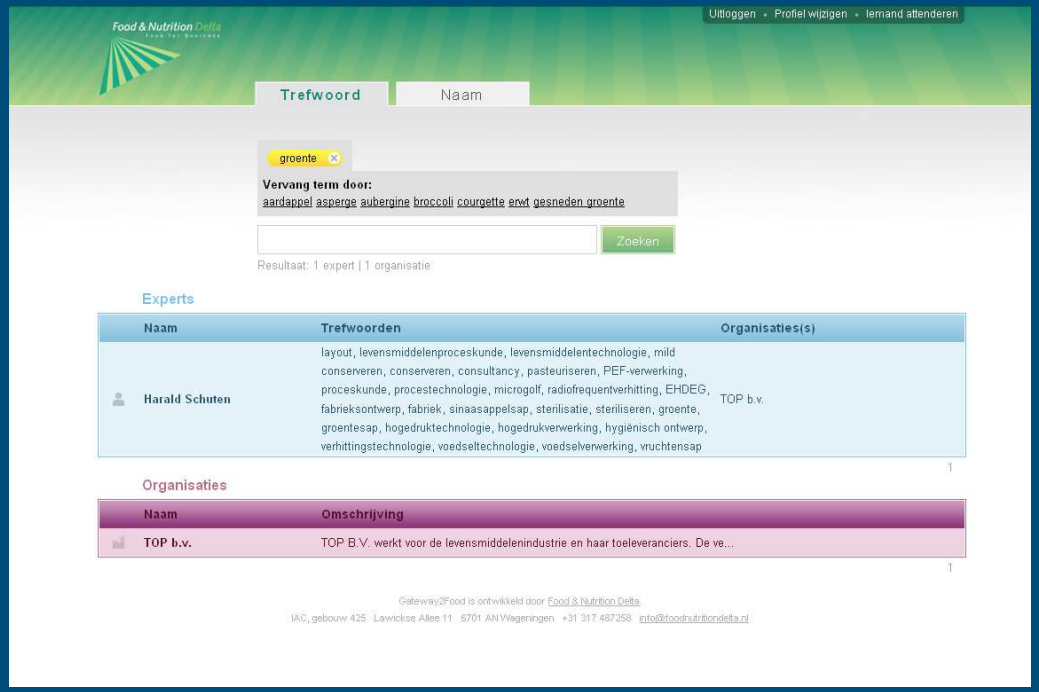
tiffany release 1.3.1
Done
Internet
100%

FND “Gateway 2 Food”

- Competence Guide
  - relevant experts and organisations
- Experts tag their own profiles
  - food thesaurus (SKOS)
- Search matches terms
  - and provides ways to narrow/broaden your search by using thesaurus relations

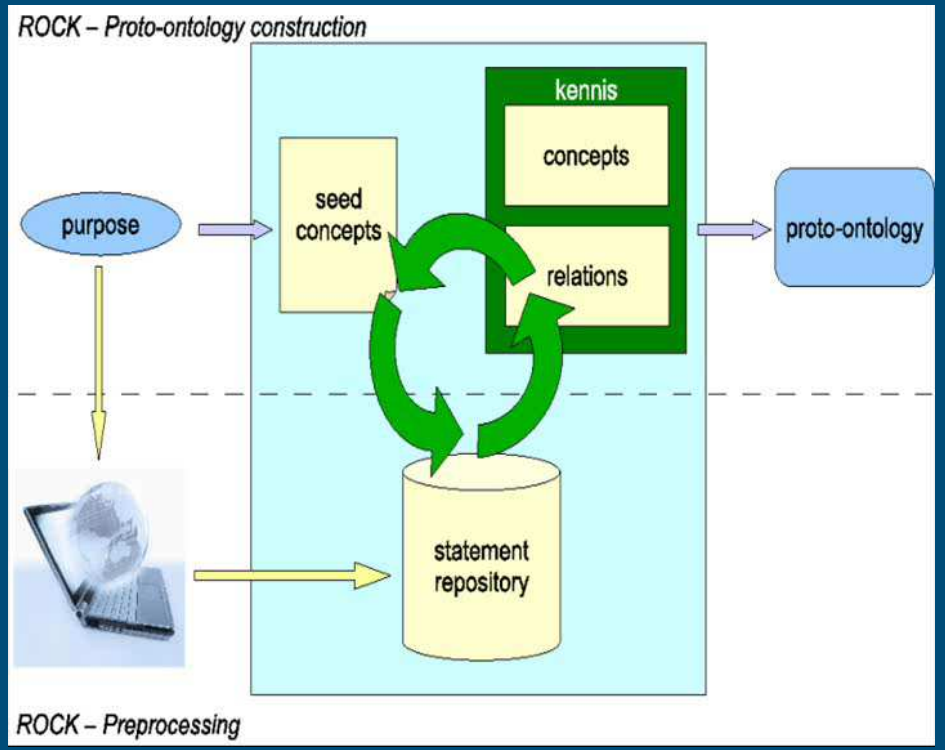


Rapid Ontology Construction

Supporting the domain expert in independently creating models

ROC tool uses expert input to pick relevant starting points from existing models

Domain model (‘proto-ontology’) is created by interactively extending a set of selected core concepts and relations



Thank you for your attention

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