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Story of Wheat

# Landing Page

## Story of Wheat

### Part of Education Series: Connect the Dots

#### Author: Mahi/Miraj

### Slide background

#### Function grid (12 + 1)

# Introduction

## Preview Story of Wheat

### Intro text

#### Lead into Knowledge Graph

# Knowledge Graph

## Connect the Dots

### Explain how things are related and share data

#### Nouns (nodes)

#### Verbs (edges)

#### Seven core Relationships (below)

## Highlight Story terms in Knowledge Graph

### Next slides provide detail about Nouns (nodes) and Verbs (edges, relationships)

# Preview

## Relationships

### There are 7 featured relationships as seen here: <https://afdsi.com/collection/collection-carousel/wheat/>

### The diagrams are dense and difficult to read

### Proposal

#### Use only one Relationship diagram rendered as a PNG

#### Use Panning-Media feature (similar to Constellations treatment) to zoom in on parts of the featured Relationship

#### Use Relationship Symbols (below) and Relationship thumbnails on a single page for the remaining 6 Relationships

#### Provide links to zoomable diagrams in Attachment

## Page layout

### See section 8 to visualize page layout, referenced in each section below.

# Relationships

## Causative Relationship

### Relationship Symbol

#### Item, upper left

|  |
| --- |
|  |

#### Definition

##### All relationships producing an effect or being the effect of something. An expression of an agent causing or forcing a patient to perform an action (or to be in a certain condition). Functioning as an agent or cause.

### Function

#### Landscape right

##### H4

###### H5

###### H5

#### Landscape left

##### Function SVG

### Slide background

#### Complement function diagram

### Resource Link (CTA button - no Attachment)

#### SVG on separate page

#### SVG uses zoom

## Instrumental Relationship

### Relationship Symbol

#### Item, upper left

|  |
| --- |
|  |

#### Definition

##### Indicates all relationships serving or acting as a means or aid. By means of an instrument or an agent. The means whereby some act is accomplished.

### Function

#### Landscape right

##### H4

###### H5

###### H5

#### Landscape left

##### Function SVG

### Slide background

#### Complement function diagram

### Resource Link (CTA button - no Attachment)

#### SVG on separate page

#### SVG uses zoom

## Partitive Relationship

### Relationship Symbol

#### Item, upper left

|  |
| --- |
|  |

#### Definition

##### For continuants: C part\_of C' if and only if: given any c that instantiates C at a time t, there is some c' such that c' instantiates C' at time t, and c \*part\_of\* c' at t. For processes: P part\_of P' if and only if: given any p that instantiates P at a time t, there is some p' such that p' instantiates P' at time t, and p \*part\_of\* p' at t. (Here \*part\_of\* is the instance-level part-relation.)

### Function

#### Landscape right

##### H4

###### H5

###### H5

#### Landscape left

##### Function SVG

### Slide background

#### Complement function diagram

### Resource Link (CTA button - no Attachment)

#### SVG on separate page

#### SVG uses zoom

## Quantitative Relationship

### Relationship Symbol

#### Item, upper left

|  |
| --- |
|  |

#### Definition

##### All relationships involving a quantity or a measure.

### Function

#### Landscape right

##### H4

##### H4

###### H5

###### H5

###### H5

#### Landscape left

##### PNG version of SVG

### Slide background

#### Complement function diagram

### Resource Link (CTA button - no Attachment)

#### SVG on separate page

#### SVG uses zoom

## Spatial Relationship

### Relationship Symbol

#### Item, upper left

|  |
| --- |
|  |

#### Definition

### Function

#### Landscape right

##### H4

###### H5

###### H5

#### Landscape left

##### Function SVG

### Slide background

#### Complement function diagram

### Resource Link (CTA button - no Attachment)

#### SVG on separate page

#### SVG uses zoom

## Taxonomic Relationship

### Relationship Symbol

#### Item, upper left

|  |
| --- |
|  |

#### Definition

##### Relationships linking concepts which are related in the scientifical sense in a bilogical taxonomy (e.g. species, families, etc.). To relate concepts taxonomically.

### Function

#### Landscape right

##### H4

###### H5

###### H5

#### Landscape left

##### Function SVG

### Slide background

#### Complement function diagram

### Resource Link (CTA button - no Attachment)

#### SVG on separate page

#### SVG uses zoom

## Temporal Relationship

### Relationship Symbol

#### Item, upper left

|  |
| --- |
|  |

#### Definition

### Function

#### Landscape right

##### H4

###### H5

###### H5

#### Landscape left

##### Function SVG

### Slide background

#### Complement function diagram

### Resource Link (CTA button - no Attachment)

#### SVG on separate page

#### SVG uses zoom

# Transition slide

## Set up: Participants in the Knowledge Graph

# Persona

## Biologist

### Persona image

|  |
| --- |
|  |

#### SVG upper left

#### Persona description

##### Gender

###### Female

##### Tasks

###### Biologists study humans, plants, animals, and the environments in which they live. Biologists work in laboratories, offices, industrial settings, and outdoors.

##### Attire

##### Attributes

#### Reference

##### https://www.onetonline.org/link/summary/19-1029.04

### Function

#### SVG center

### Description

#### Text left

##### H4

##### H4

##### H4

#### Text right

##### H4

##### H4

###### H5

###### H5

### Slide background

#### Complement function diagram

### Attachment

#### Key words

### Function concept

|  |
| --- |
|  |
|  |

## Breeder

### Persona image

|  |
| --- |
|  |

#### SVG upper left

#### Persona description

##### Gender

###### Female

##### Tasks

###### Apply information about plant genome, hormones, proteins and their effects to modulate plant height, branching, tiller size and canopy features. So that a resultant modulated wheat plants with higher yield can be produced.

##### Attire

##### Attributes

#### Reference

##### https://www.onetonline.org/link/summary/19-1013.00

### Function

#### SVG center

### Description

#### Text left

##### H4

##### H4

##### H4

#### Text right

##### H4

##### H4

###### H5

###### H5

### Slide background

#### Complement function diagram

### Attachment

#### Key words

##### Phenotypes

##### Target chromosomes

#### Option

##### iFrame Wedge Server Glucosinolate to illustrate study data integration

### Function concept

|  |
| --- |
| Wheat phenotypes (generalize; use text-left and text right to identify phenotype properties) |
|  |

## Grower (Farmer)

### Persona image

|  |
| --- |
|  |

#### Persona description

##### Gender

###### Male

##### Tasks

###### Raise crops, such as corn, wheat, tobacco, cotton, vegetables, fruits.

##### Attire

###### Unbuttoned shirt

##### Attributes

###### Sun-protecting hat

##### Reference

###### https://www.bls.gov/ooh/management/farmers-ranchers-and-other-agricultural-managers.htm

### Function

#### SVG center

### Description

#### Text left

##### H4

##### H4

##### H4

#### Text right

##### H4

##### H4

###### H5

###### H5

###### H5

### Slide background

#### Complement function diagram

### Attachment

#### Key words

##### Plant identity

##### Plant monitoring (growth stages)

##### Plant protection (specific threats like virus and bacteria)

### Function concept

|  |  |
| --- | --- |
| Generalize. add elevation (perspective); remove mountains |  |
| Drones Revolutionize Farmer's Lives | Drone as monitor (data collector and controllable actions)  Drone as agricultural equipment (performing specific actions) |

## Grain Handlers

### Persona image

|  |
| --- |
|  |

#### SVG upper left

#### Persona description

##### Gender

###### Male

##### Tasks

##### Attire

##### Attributes

##### Reference

###### https://www.onetonline.org/link/summary/51-9061.00

### Function

#### SVG center

### Description

#### Text left

##### H4

##### H4

##### H4

#### Text right

##### H4

##### H4

###### H5

###### H5

###### H5

### Slide background

#### Complement function diagram

### Attachment

#### Key words

##### Sensors

##### Moisture

##### CO2

##### Temperature

##### Use charts

### Function concept

|  |  |  |  |
| --- | --- | --- | --- |
| Storage | Moisture | Carbon Dioxide | Termperature |
|  |  |  |  |

## Grain Blender

### Persona image

|  |
| --- |
|  |

#### SVG upper left

#### Persona description

##### Gender

##### Tasks

##### Attire

##### Attributes

##### Reference

###### https://www.onetonline.org/link/summary/51-9061.00

### Function

#### SVG center

### Description

#### Text left

##### H4

##### H4

##### H4

#### Text right

##### H4

##### H4

###### H5

###### H5

###### H5

### Slide background

#### Complement function diagram

### Attachment

#### Key words

##### Near InfraRed (NIR) analysis

##### Fingerprint (identity)

##### Reuse Google Sheets fingerprint data

### Function concept

|  |  |
| --- | --- |
| Biological fingerprints for identity | “Blended to meet customer specifications” |
| Fingerprint background, id pattern, finger print vector color line texture,  thumbprint bio background. | CanStock |  |

## Miller

### Persona image

|  |
| --- |
|  |

#### SVG upper left

#### Persona description

##### Gender

###### Male

##### Tasks

###### Operate a mill, a machine to grind a grain (for example corn or wheat) to make flour.

##### Attire

##### Attributes

##### Reference

###### https://esco.ec.europa.eu/en/classification/occupation?uri=http://data.europa.eu/esco/occupation/db25e659-d77c-4f4a-a8a2-ee199d060345

### Function

#### SVG center

### Description

#### Text left

##### H4

##### H4

##### H4

#### Text right

##### H4

##### H4

###### H5

###### H5

###### H5

### Slide background

#### Complement function diagram

### Attachment

#### Key words

##### Bran for animal feed (for farmer)

##### Flour for human food (for baker)

##### Barley for beer (for brewer)

### Function concept

|  |
| --- |
| Creating specific grain products |
|  |
|  |

## Brewer (Manufacturer, food)

### Persona image

|  |
| --- |
|  |

#### SVG upper left

#### Persona description

##### Gender

###### Male

##### Tasks

##### Attire

##### Attributes

##### Reference

###### https://www.onetonline.org/link/summary/19-4013.00

### Function

#### SVG center

### Description

#### Text left

##### H4

##### H4

##### H4

#### Text right

##### H4

##### H4

###### H5

###### H5

###### H5

### Slide background

#### Complement function diagram

### Attachment

#### Key words

##### Word

##### Word

##### Word

### Function concept

|  |  |
| --- | --- |
| Barley beers | Wheat beers |
| Similar to Wheat except use word “Barley” | Brewing with Wheat: Hieronymus, Stan: 9780937381953: Amazon.com: Books |

## Baker (Manufacturer, food)

### Persona image

|  |
| --- |
|  |

#### SVG upper left

#### Persona description

##### Gender

###### Female

##### Tasks

###### Create recipes. Ordering ingredients. Produce breads, cakes, pastries, pies, cookies and other goods.

##### Attire

##### Attributes

##### Reference

###### https://www.onetonline.org/link/summary/51-3011.00

### Function

#### SVG center

### Description

#### Text left

##### H4

##### H4

##### H4

#### Text right

##### H4

##### H4

###### H5

###### H5

###### H5

### Slide background

#### Complement function diagram

### Attachment

#### Key words

##### Grain by type

###### For pastry

###### For pasta

###### For bread, whole wheat

###### For breakfast cereals

### Function concept

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Pastry | Pasta | Bread | Pizza | Breakfast cereal |

## Information Manager

### Persona image

|  |
| --- |
|  |

#### SVG upper left

#### Persona description

##### Gender

###### Female

##### Tasks

###### Oversee and implement organization-wide information systems. Responsible for ensuring smooth operations and protecting valuable data and information.

##### Attire

###### Formal business attire

##### Attributes

##### Reference

###### https://www.onetonline.org/link/summary/15-1299.09

### Function

#### SVG center

### Description

#### Text left

##### H4

##### H4

##### H4

#### Text right

##### H4

##### H4

###### H5

###### H5

###### H5

### Slide background

#### Complement function diagram

### Attachment

#### Key words

##### Elevator data

##### NL data

##### Word

### Function concept

|  |  |
| --- | --- |
| Data from breeder, grower, blender, bulk storage, miller, feed manufacturer, feed manufacturer |  |
|  | Gernalize diagram on left (less detail)  Prepare/anticipate this diagram  https://benetta.net/\_supplier/mahi/svg-projects/personas-data/ |

## Nutritionist

### Persona image

|  |
| --- |
|  |

#### SVG upper left

#### Persona description

##### Gender

###### Female

##### Tasks

###### A nutritionist may work on weight loss, nutritional or hormonal balance, digestion, or food allergies.

##### Attire

###### Clinic dietitians most frequently (40%) wear khaki pants and collared knit shirt while hospital dietitians most frequently (42%) wear slacks and collared shirt.

##### Attributes

##### Reference

###### https://www.onetonline.org/link/summary/29-1031.00

### Function

#### SVG center

### Description

#### Text left

##### H4

##### H4

##### H4

#### Text right

##### H4

##### H4

###### H5

###### H5

###### H5

### Slide background

#### Complement function diagram

### Attachment

#### Key words

##### Word

##### Word

##### Word

### Function concept

|  |  |
| --- | --- |
| Could reuse Rice Nutrition Function | Rethink alternative |

## Government Administrator

### Persona image

|  |
| --- |
|  |

#### SVG upper left

#### Persona description

##### Gender

###### Female

##### Tasks

###### Regulatory. Policy administration.

##### Attire

###### Professional business

##### Attributes

##### Reference

###### https://www.onetonline.org/link/summary/15-2051.00

### Function

#### SVG center

### Description

#### Text left

##### H4

##### H4

##### H4

#### Text right

##### H4

##### H4

###### H5

###### H5

###### H5

### Slide background

#### Complement function diagram

### Attachment

#### Key words

##### Use EU data portal terms

##### Use EU data portal API

##### Word

### Function concept

|  |  |  |
| --- | --- | --- |
| Image: Objective Description Wheat (USDA document cover) | Image: Wheat Inspection Policies (USDA Document cover) | Additional Regulatory-related Image (document cover) |

## Traders (Exporters/Importers)

### Persona image

|  |
| --- |
|  |

#### SVG upper left

#### Persona description

##### Gender

###### Male

##### Tasks

##### Attire

###### Professional business

##### Attributes

##### Reference

###### https://www.onetonline.org/link/summary/13-2099.01

### Function

#### SVG center

### Description

#### Text left

##### H4

##### H4

##### H4

#### Text right

##### H4

##### H4

###### H5

###### H5

###### H5

### Slide background

#### Complement function diagram

### Attachment

#### Key words

##### Product identity for Buy/Sell contracts

##### Currencies

##### Export/Import regulations and tariffs

### Function concept

|  |  |
| --- | --- |
| Data Dashboards | Visual Organization Campaign | IGW | Simplify Trader Function diagram  Somehow introduce currency  May want to feature Product Passport as the Electronic Trading Document |
|  |  |

### Related to Traders (TBD)

#### Product Passport

##### Product Passport logo

#### Electronic Record

##### Objective Description of Wheat

##### Wheat and Flour Testing Methods

#### Attachment

##### Google Doc PDF: Objective Description of Wheat

##### Google Doc PDF: Wheat and Flour Testing Methods

## Consumer

### Persona image

|  |
| --- |
|  |

#### SVG upper left

#### Persona description

##### Gender

###### Feale

##### Tasks

###### Pays to consume goods and services.

##### Attire

###### Casual

##### Attributes

##### Reference

### Function

#### SVG center

### Description

#### Text left

##### H4

##### H4

##### H4

#### Text right

##### H4

##### H4

###### H5

###### H5

###### H5

### Slide background

#### Complement function diagram

### Attachment

#### Key words

##### Word

##### Word

##### Word

### Function concept

|  |
| --- |
| Display different grain products; consider: repeating diagrams from Food Manufacturer |

# Page Layout (grid)

## Function

|  |  |  |
| --- | --- | --- |
| 1 | 2 | 3 |
| 4 | Integrated data  Integrated queries | 5 |
| 6 | 7 |
| 8 | 9 |
| 10 | 11 | 12 |

## Persona

|  |  |  |
| --- | --- | --- |
| 1 | 2 | 3 |
| 4 | Collaboration among teams  Information Sharing | 5 |
| 6 | 7 |
| 8 | 9 |
| 10 | 11 | 12 |

# Open Issues

## Technical documents

### Semantic documents

#### LODE for ontologies

#### JSON-LD and SMV

#### GS1 integration

### Wheat ontology

#### Target: Information Manager

### Wheat Traits ontology

#### Target: Breeder

#### Chromosomes

### Beer ontology

#### Target: Brewer

## iFrame

### Wedge-Client

#### Breakfast cereal marketing images

### Wedge-Server

#### ChEFS

##### Target: Nutritionist

#### ChEMATIC

##### Target: Nutritionist

###### Selenium

#### FNDDS

##### Target: Nutritionist

##### Target: Baker

### Non-wedge

#### NALT

##### Target: Information Manager

## Google docs

### USDA Objective Description of Wheat

### USDA Wheat Inspections

#### Target: Government Administrator