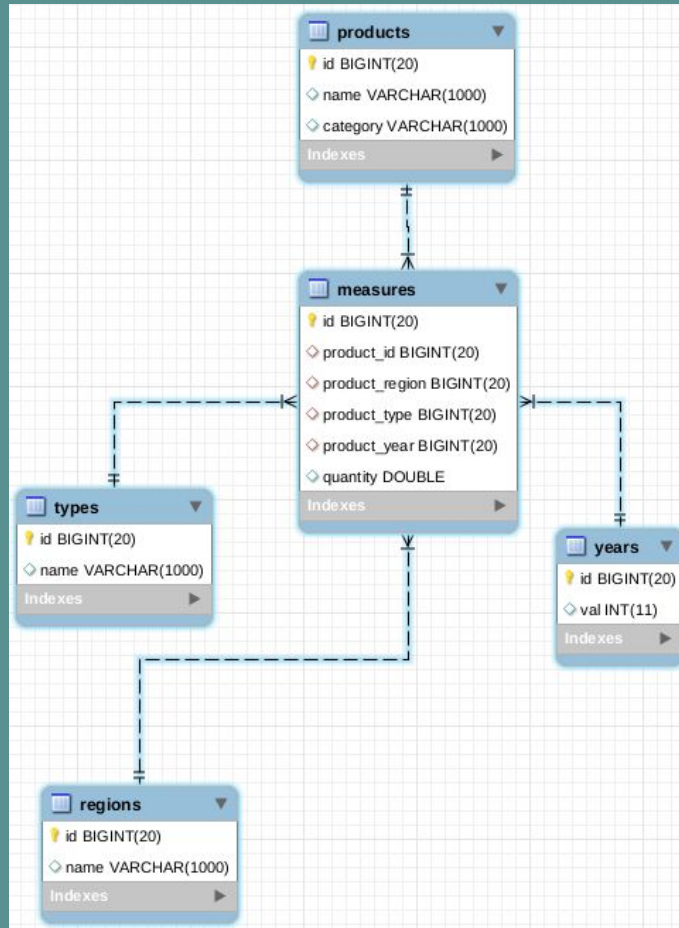


BI aplicado al mundo agrícola

Cómo informatizar un sector anquilosado en
el pasado para aumentar su rendimiento



Datawarehouse Diagrama ER



Datawarehouse implementación

~/universidad/tin/trabajo (master ✓) ☐ mysql -u guillermo -p < sql.sql

~/universidad/tin/trabajo (master ✓) ☐ mysql -u guillermo -p -D tin

```
mysql> show tables;
+-----+
| Tables_in_tin |
+-----+
| measures      |
| products      |
| regions       |
| types         |
| years         |
+-----+
5 rows in set (0.00 sec)
```

Datawarehouse implementación

```
mysql> describe measures;
```

Field	Type	Null	Key	Default	Extra
id	bigint(20)	NO	PRI	NULL	auto_increment
product_id	bigint(20)	YES	MUL	NULL	
product_region	bigint(20)	YES	MUL	1	
product_type	bigint(20)	YES	MUL	1	
product_year	bigint(20)	YES	MUL	1	
quantity	double	YES		0	

```
6 rows in set (0.00 sec)
```

```
mysql> describe products;
```

Field	Type	Null	Key	Default	Extra
id	bigint(20)	NO	PRI	NULL	auto_increment
name	varchar(1000)	YES		NULL	
category	varchar(1000)	YES		NULL	

```
3 rows in set (0.00 sec)
```

Datawarehouse implementación

```
mysql> describe regions;
```

Field	Type	Null	Key	Default	Extra
id	bigint(20)	NO	PRI	NULL	auto_increment
name	varchar(1000)	YES		NULL	

```
2 rows in set (0.00 sec)
```

```
mysql> describe types;
```

Field	Type	Null	Key	Default	Extra
id	bigint(20)	NO	PRI	NULL	auto_increment
name	varchar(1000)	YES		NULL	

```
2 rows in set (0.00 sec)
```

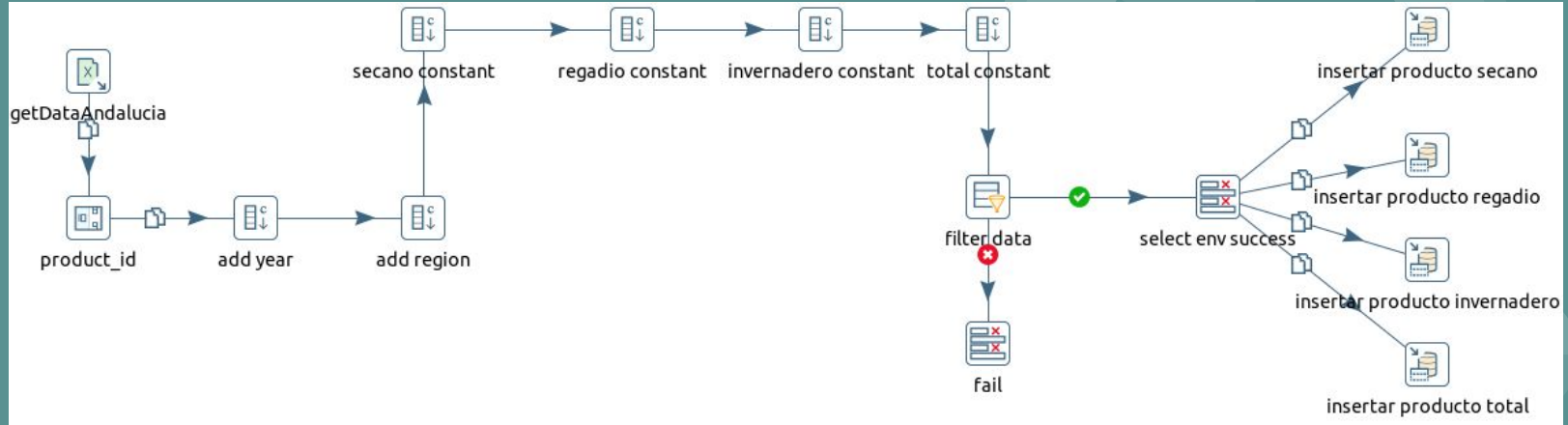
Datawarehouse implementación

```
mysql> describe years;
```

Field	Type	Null	Key	Default	Extra
id	bigint(20)	NO	PRI	NULL	auto_increment
val	int(11)	YES		NULL	

```
2 rows in set (0.00 sec)
```

Proceso ETL con PDI



Cubo OLAP con Pentaho Server

Data Source Model Editor

The screenshot displays the 'Data Source Model Editor' window. It features three main panels: 'Available' on the left, 'Analysis' in the center, and 'Properties' on the right. The 'Available' panel lists various data elements under categories like Measures, Products, Regions, and Types. The 'Analysis' panel, which is the active tab, shows a hierarchical tree structure where elements are being built into a model. This tree includes a 'Measures' folder with 'Quantity', a 'Dimensions' folder containing 'Products', 'Regions', 'Types', and 'Years', each with its own sub-elements like 'Id' and 'Name'. The 'Properties' panel is currently empty. At the bottom right, there are 'OK' and 'Cancel' buttons.

Available

- Measures
 - Id
 - Product Id
 - Product region
 - Product type
 - Product year
 - Quantity
- Products
 - Category
 - Id
 - Name
- Regions
 - Id
 - Name
- Types

Analysis

- Measures
 - Quantity
- Dimensions
 - Products
 - Category
 - Id
 - Name
 - Regions
 - Id
 - Name
 - Types
 - Id
 - Name
 - Years
 - Id
 - Val

Properties

OK Cancel

Reporte con PRD

julio 01, 2020 @ 06:03

Listado de productos según su tipo

Tipo de cultivo: secano

producto	cantidad (kg)
TRIGO BLANDO Y SEMIDURO	595,24
TRIGO BLANDO Y SEMIDURO	110.439,78
TRIGO BLANDO Y SEMIDURO	23,31

Tipo de cultivo: regadio

producto	cantidad (kg)
TRIGO BLANDO Y SEMIDURO	595,24
TRIGO BLANDO Y SEMIDURO	110.439,78
TRIGO BLANDO Y SEMIDURO	23,31

Tipo de cultivo: invernadero

producto	cantidad (kg)
TRIGO BLANDO Y SEMIDURO	595,24
TRIGO BLANDO Y SEMIDURO	110.439,78
TRIGO BLANDO Y SEMIDURO	23,31

Tipo de cultivo: total

producto	cantidad (kg)
TRIGO BLANDO Y SEMIDURO	595,24
TRIGO BLANDO Y SEMIDURO	110.439,78
TRIGO BLANDO Y SEMIDURO	23,31

Reporte con PRD

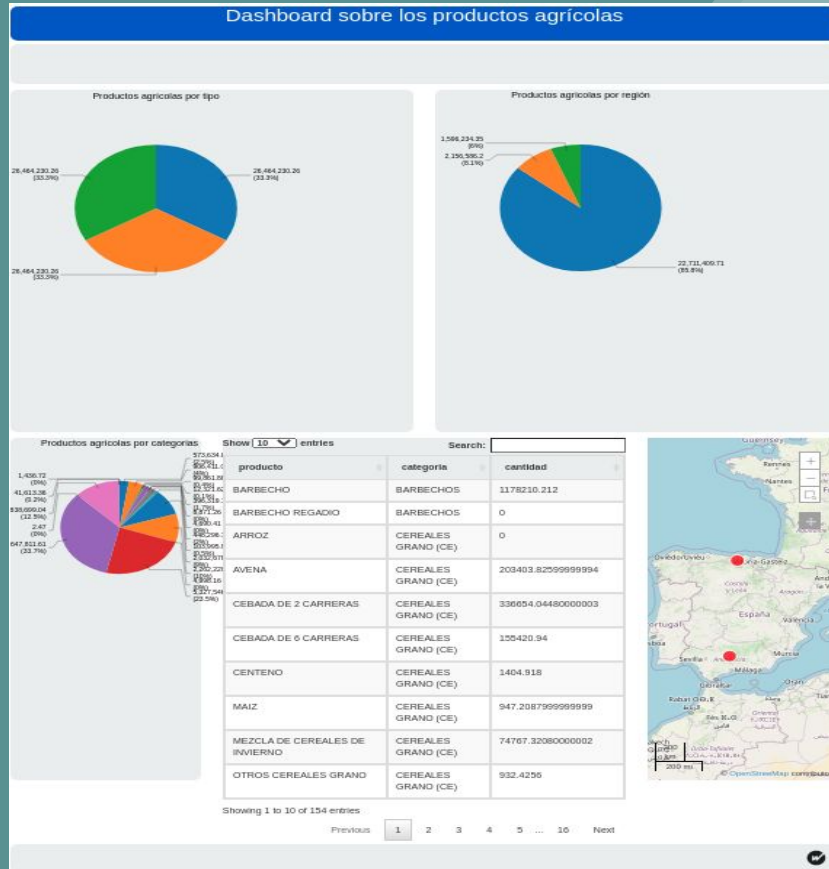
julio 01, 2020 @ 06:04

Reporte de la cantidad de grano recolectada por Comunidad Autónoma y a

Año: 2.019

Comunidad Autónoma		Cantidad
Andalucía		90.845.638,84
Canarias		8.626.344,79
Cantabria		6.384.937,39

Dashboard con Pentaho Server



Mapa Dashboard Data

```
import org.pentaho.reporting.engine.classic.core.util.TypedTableModel;

String[] columnNames = new String[]{
    "Longitude",
    "Latitude",
    "Description"
};

Class[] columnTypes = new Class[]{
    Float.class,
    Float.class,
    String.class
};

TypedTableModel model = new TypedTableModel(columnNames, columnTypes);

model.addRow(new Object[]{ new Float(-4.5000000), new Float(37.6000000), new String("Andalucia") });
model.addRow(new Object[]{ new Float(-15.5000000), new Float(28.0000000), new String("Canarias") });
model.addRow(new Object[]{ new Float(-4.0333300), new Float(43.2000000), new String("Cantabria") });

return model;
```

Chart Dashboard Tooltip Function

```
function(scene)
{
  var categIndex = scene.childIndex();

  var valueScene = scene.root.childNodes[categIndex].childNodes[categIndex];

  var fix = def.html.escape;
  var vars = scene.vars;
  return "<div style='text-align:left'>" +
    "<b>Category</b>: " + fix(scene.getCategoryLabel()) + "<br/>" +
    "<b>Value</b>: " + fix(valueScene.getValueLabel()) + "<br/>" +
    "</div>";
}
```

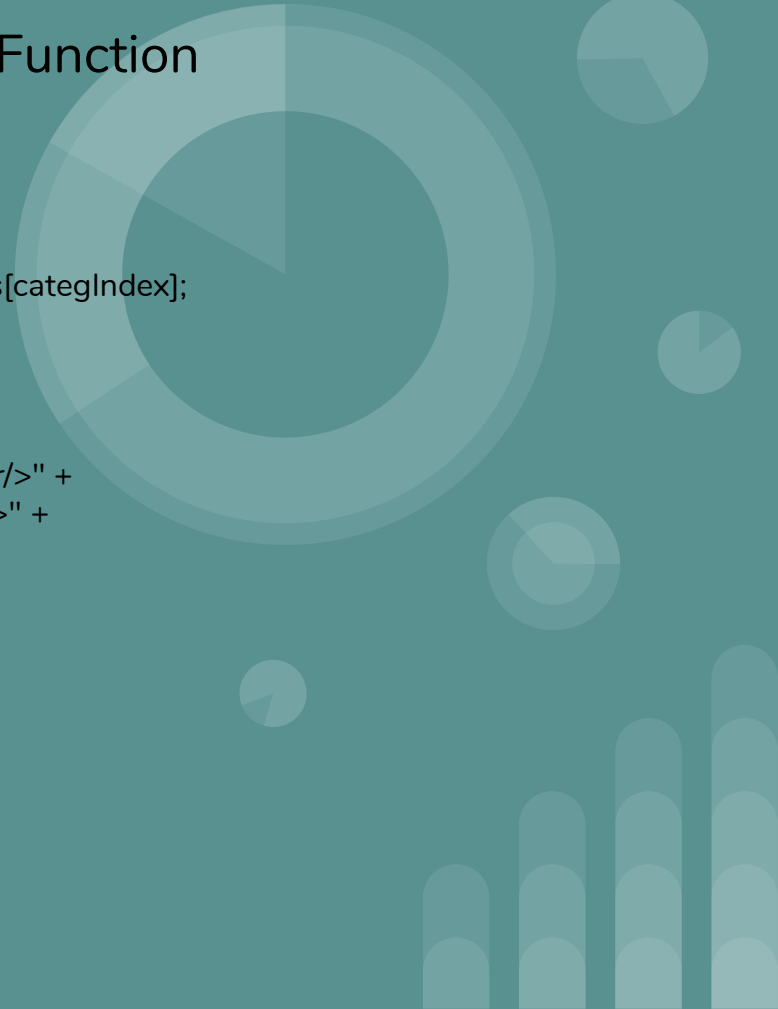


Chart Dashboard Click Function

```
function(scene)
{
  var category = scene.vars.category.rawValue;
  var categoryArray = category.split('~');

  var paramToFire = categoryArray[...];
  dashboard.fireChange('...', paramToFire);
}
```



¿Alguna pregunta?



Muchas Gracias

Guillermo López García
2020-07-02

