



50
YEARS

Publications Office
of the European Union

THEMATIC SESSION

EU DATA VIZ

Luxembourg

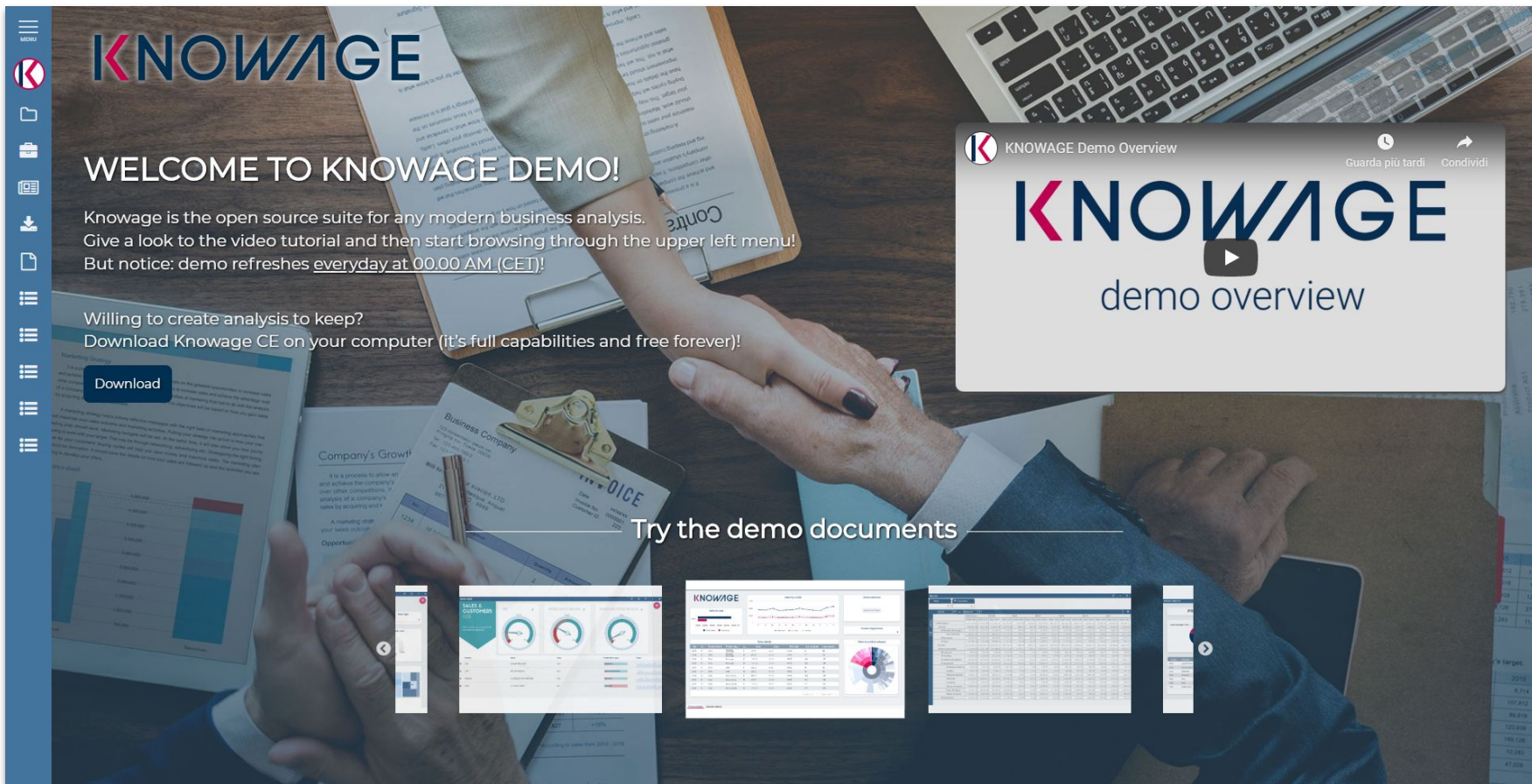
12 November 2019



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*Front-end developer at
Knowage – Engineering
Ingegneria Informatica
(Italy)*

**Accessibility in
data visualisation**



- Menu icon
- Home icon
- Document icon
- Download icon
- File icon
- List icon
- List icon
- List icon
- List icon
- List icon
- List icon

KNOWAGE

WELCOME TO KNOWAGE DEMO!

Knowage is the open source suite for any modern business analysis.
Give a look to the video tutorial and then start browsing through the upper left menu!
But notice: demo refreshes everyday at 00.00 AM (CET)!


Willing to create analysis to keep?

Download Knowage CE on your computer (it's full capabilities and free forever)!


Download

 KNOWAGE Demo Overview

 Guarda più tardi


 Condividi

KNOWAGE



demo overview

Try the demo documents



www.knowage-suite.com

1- What does accessibility mean?

Social protection & social inclusion

Social investment

Social protection

Social Protection Committee

Persons with disabilities

United Nations Convention on the Rights of Persons with Disabilities

European disability strategy 2010-2020

European accessibility act

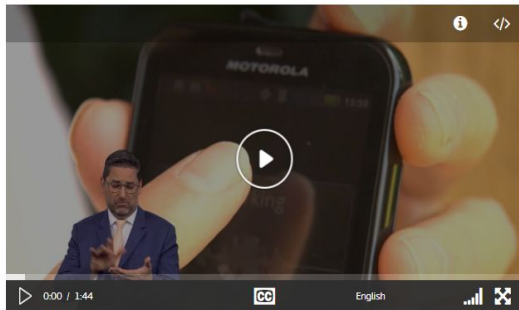
EU disability card

Accessibility standardisation

Access city award

European Social Policy Network (ESPN)

European accessibility act



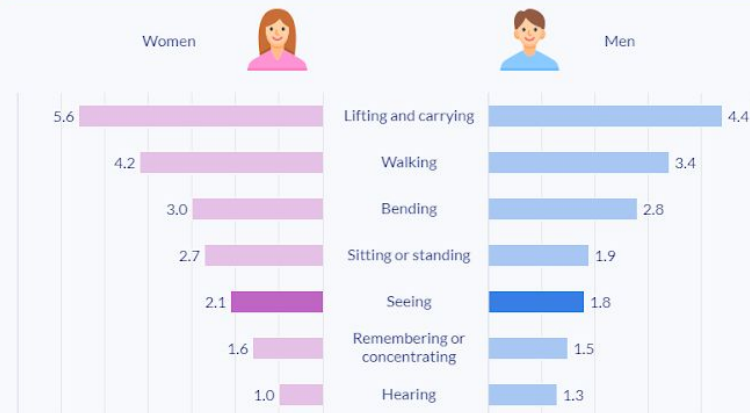
The [European accessibility act](#) is a directive that aims to improve the functioning of the internal market for accessible products and services, by removing barriers created by divergent rules in Member States.



Web Content Accessibility Guidelines



2- Impairments at work



Group	Percentage
women aged 15-64	15.1
people aged 15-64	14.0
men aged 15-64	12.9

State	No activity difficulty	With activity difficulty	Difference
EU	67	47	20
HUNGARY	61	24	37
NETHERLANDS	80	43	37
ROMANIA	64	32	32
DENMARK	78	47	31
SLOVAKIA	63	32	31
BULGARIA	62	31	31
IRELAND	61	30	31
POLAND	64	34	30
CZECH REPUBLIC	69	39	30
UNITED KINGDOM	75	48	28
BELGIUM	66	41	26
CYPRUS	71	46	25
MALTA	59	34	25
CROATIA	56	33	23
GREECE	59	36	23
LITHUANIA	63	40	23
SLOVENIA	68	47	21
GERMANY	72	52	21
ESTONIA	69	50	19
PORTUGAL	68	51	17
SPAIN	61	44	16
AUSTRIA	76	60	15
ITALY	59	46	13
LATVIA	63	51	12
FINLAND	73	61	12
SWEDEN	76	66	10
FRANCE	66	56	10
LUXEMBOURG	65	63	2

anen, and the iterets seems to "lmup auonrd".

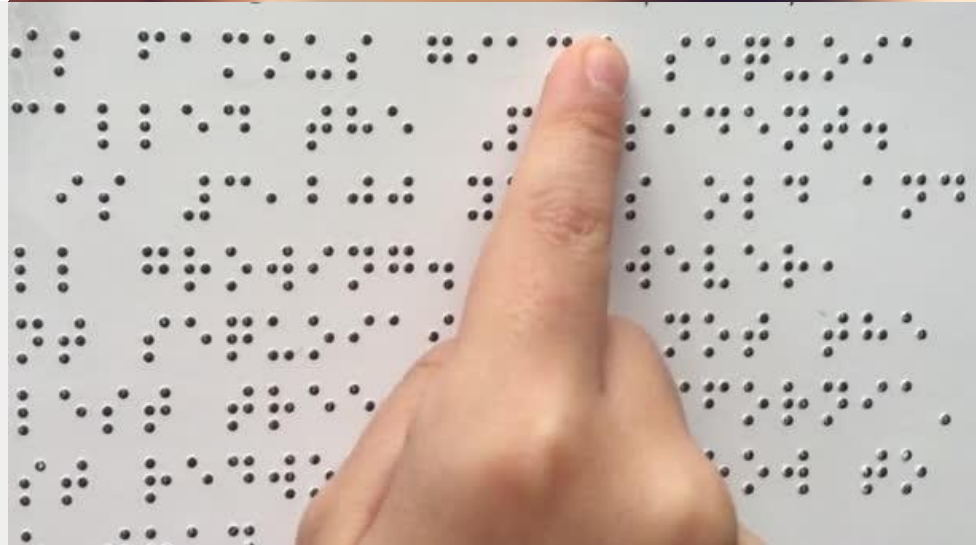
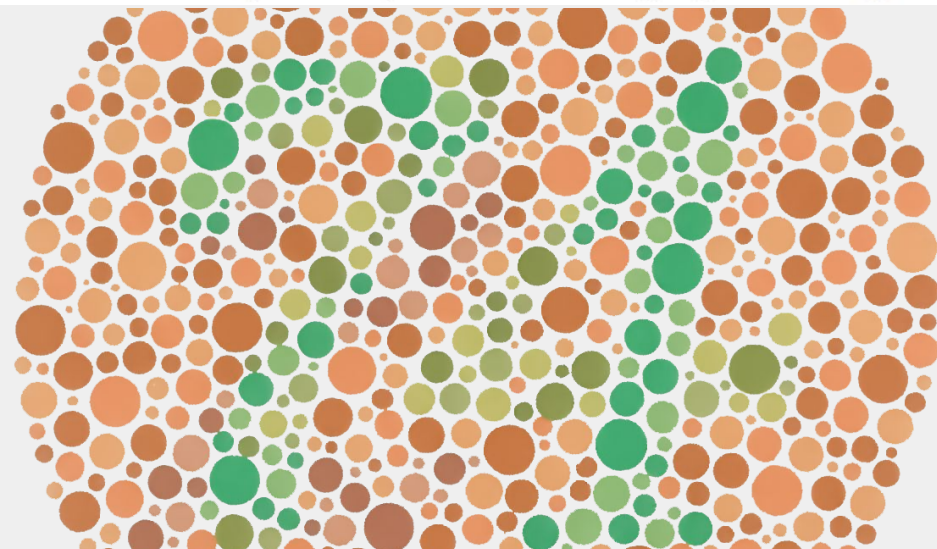
3- And Dataviz?

making a boaeokimrt of this or sthreeing? Fork it on gitub.

syxa is ccerareazhitd by dfuiitctly wth Irinaneg to raed fetnully and wth aactcure
phiresopmn despite normal iegilntence. This ilenucds dltiufcy wth plohogaincol
nwrses, plginaocoohl decondig, pseconisg seepd, origtroahhpc cdnoig, atiroduy
t-term memroy, laguange skills/vabrel cirponshemeon, and/or raipd nianmg.

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syxa is the msot reoegnzcid of rdnaieg dsedroirs, hweover not all rniaedg
eross are lneikd to dlsyixea.

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as a non-nlraocieougl deicifncey with viison or henaigr, or poor or iadtuaqene





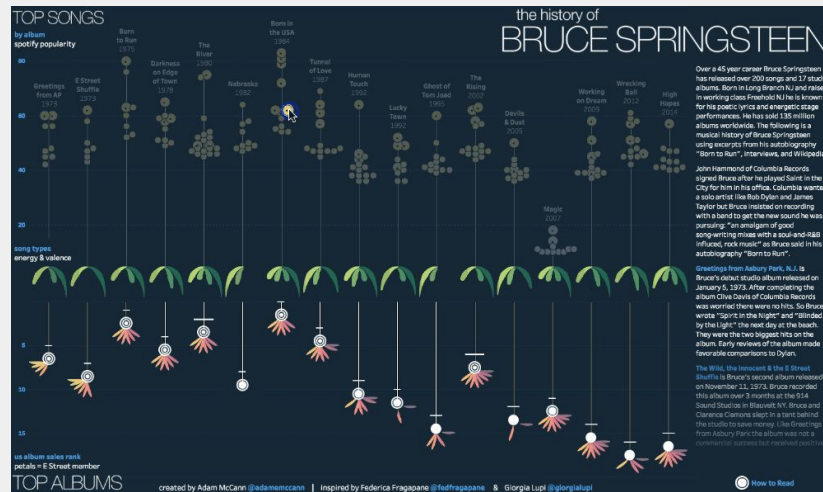
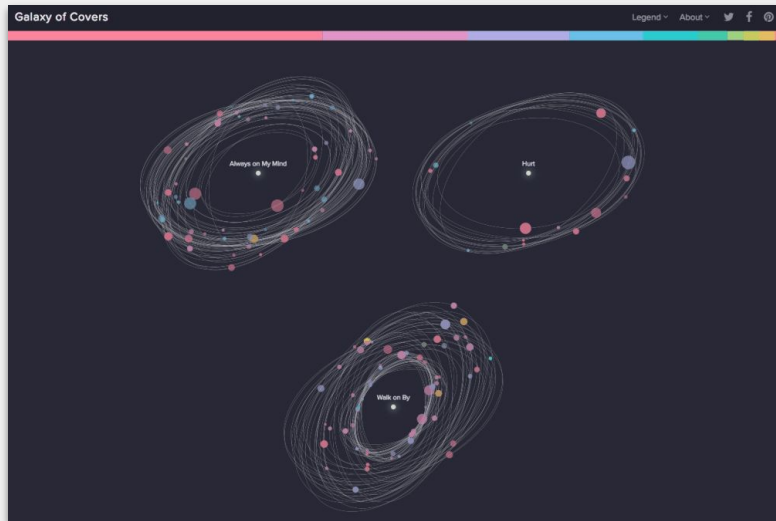
4- The ARIA importance



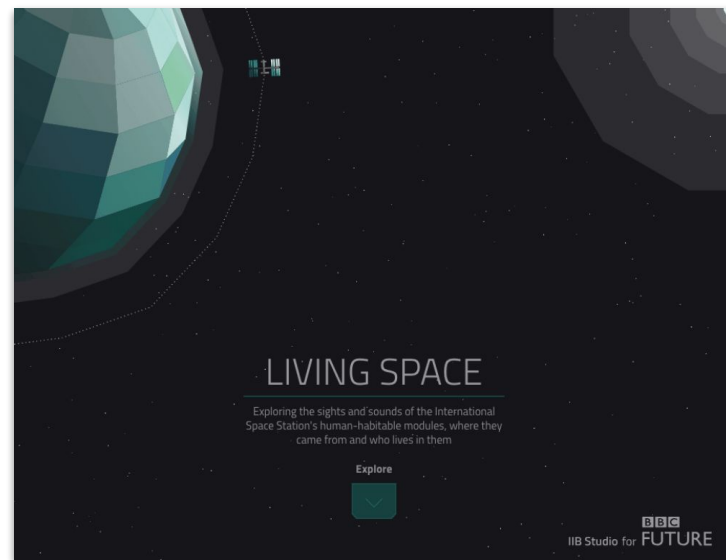
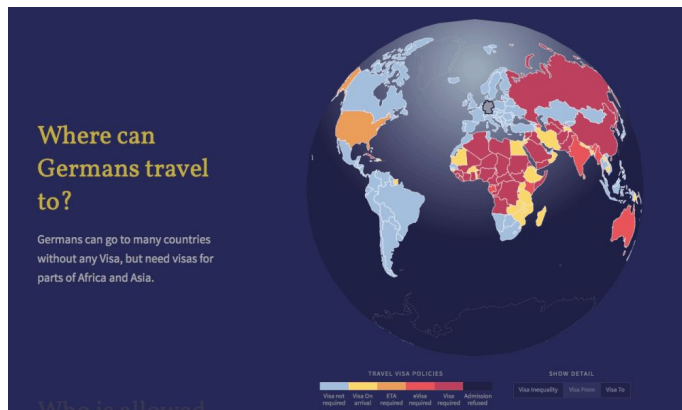
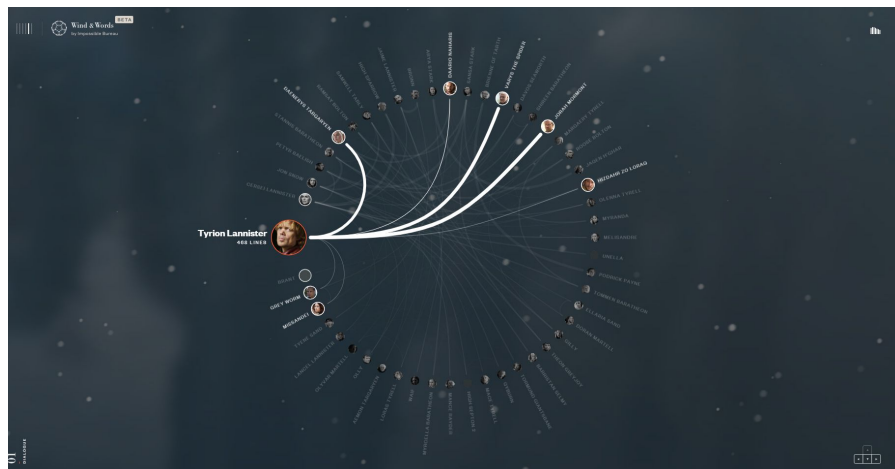
```
<div class="frame1928"  
  aria-label="The starry night - Vincent Van Gogh 1889">  
    
</div>
```



5- Mouseless navigation

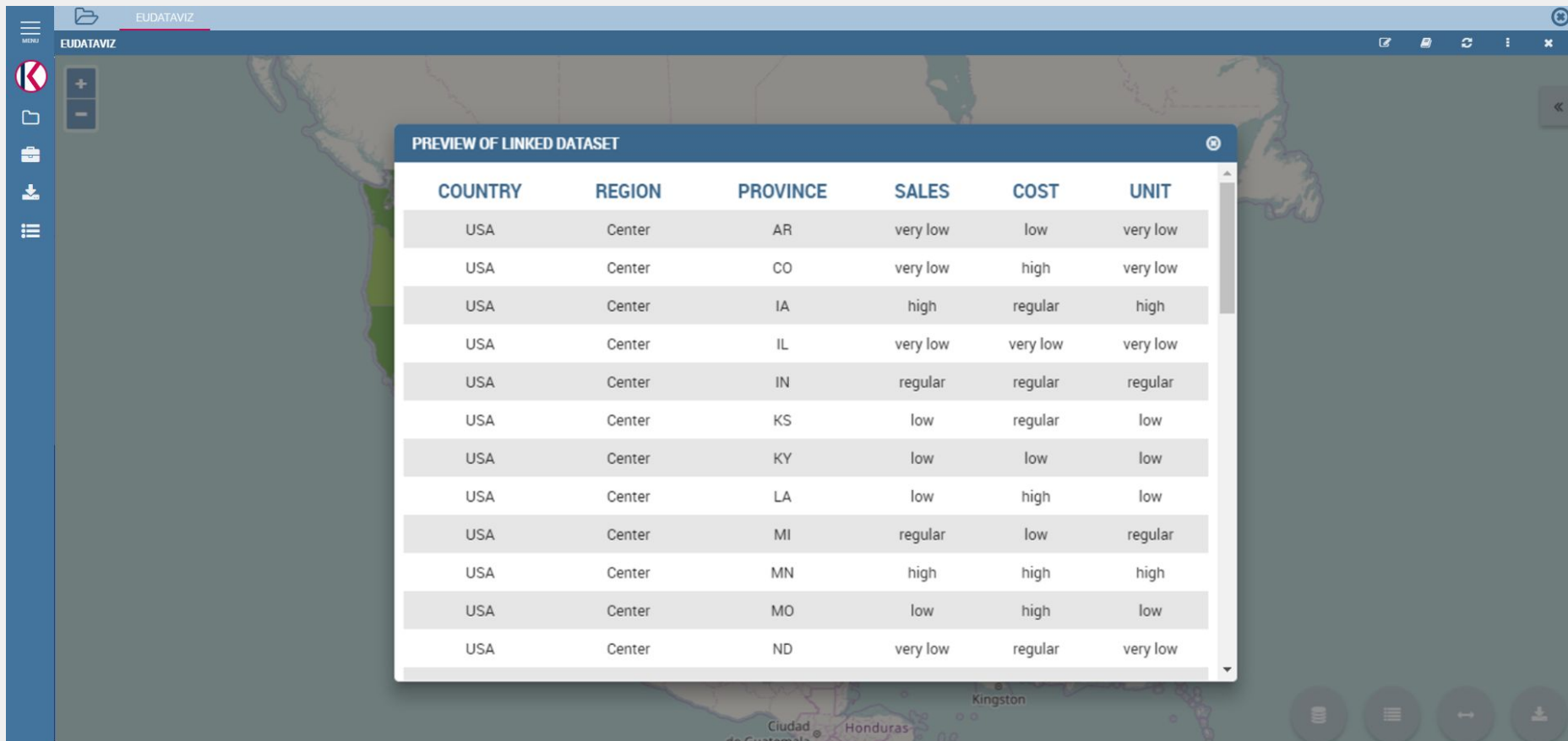


6- Mouseless navigation





7- From plain data to ranges



The screenshot shows the EUDATAVIZ application interface. A map of Central America is visible in the background. A modal window titled "PREVIEW OF LINKED DATASET" is overlaid on the map, displaying a table of data. The table has 6 columns: COUNTRY, REGION, PROVINCE, SALES, COST, and UNIT. The data rows show various US states (AR, CO, IA, IL, IN, KS, KY, LA, MI, MN, MO, ND) with corresponding sales, cost, and unit values.

COUNTRY	REGION	PROVINCE	SALES	COST	UNIT
USA	Center	AR	very low	low	very low
USA	Center	CO	very low	high	very low
USA	Center	IA	high	regular	high
USA	Center	IL	very low	very low	very low
USA	Center	IN	regular	regular	regular
USA	Center	KS	low	regular	low
USA	Center	KY	low	low	low
USA	Center	LA	low	high	low
USA	Center	MI	regular	low	regular
USA	Center	MN	high	high	high
USA	Center	MO	low	high	low
USA	Center	ND	very low	regular	very low

8- Clear visibility

text size

Adjust text size

A A 1 times

text style

Change the font used

Default ▾

line spacing

Adjust the spacing between lines of text

1 times

reset - hide

Upload File:

☐ Enable Meta Web ☐ Lock model

SAVED VERSIONS

ACTIVE	FILE NAME	CREATOR	CREATION DA...
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KNOW/GE

+ show display preferences

ANOTHER TEST

CLOSE

Search

Name	Description	
Test Business Model	Business model lorem l...	
Business Model	Business model descrip...	
Another Test	Description Lorem Ipsu...	

Name*

Another Test

Description

Description Lorem Ipsum dolor sit amet

Category

SBI Model Category 1

Data Source*

Foodmart

META WEB ☐ Enable Meta Web ☐ Lock model

SAVED VERSIONS

ACTIVE	FILE NAME	CREATOR	CREATION D...
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KNOW/GE

+ show display preferences

ANOTHER TEST

SAVE CLOSE

Search

Name	Description	
Test Business Model	Business model lorem l...	
Business Model	Business model descrip...	
Another Test	Description Lorem Ipsu...	

Name*

Another Test

Description

Description Lorem Ipsum dolor sit amet

Category

SBI Model Category 1

Data Source*

Foodmart

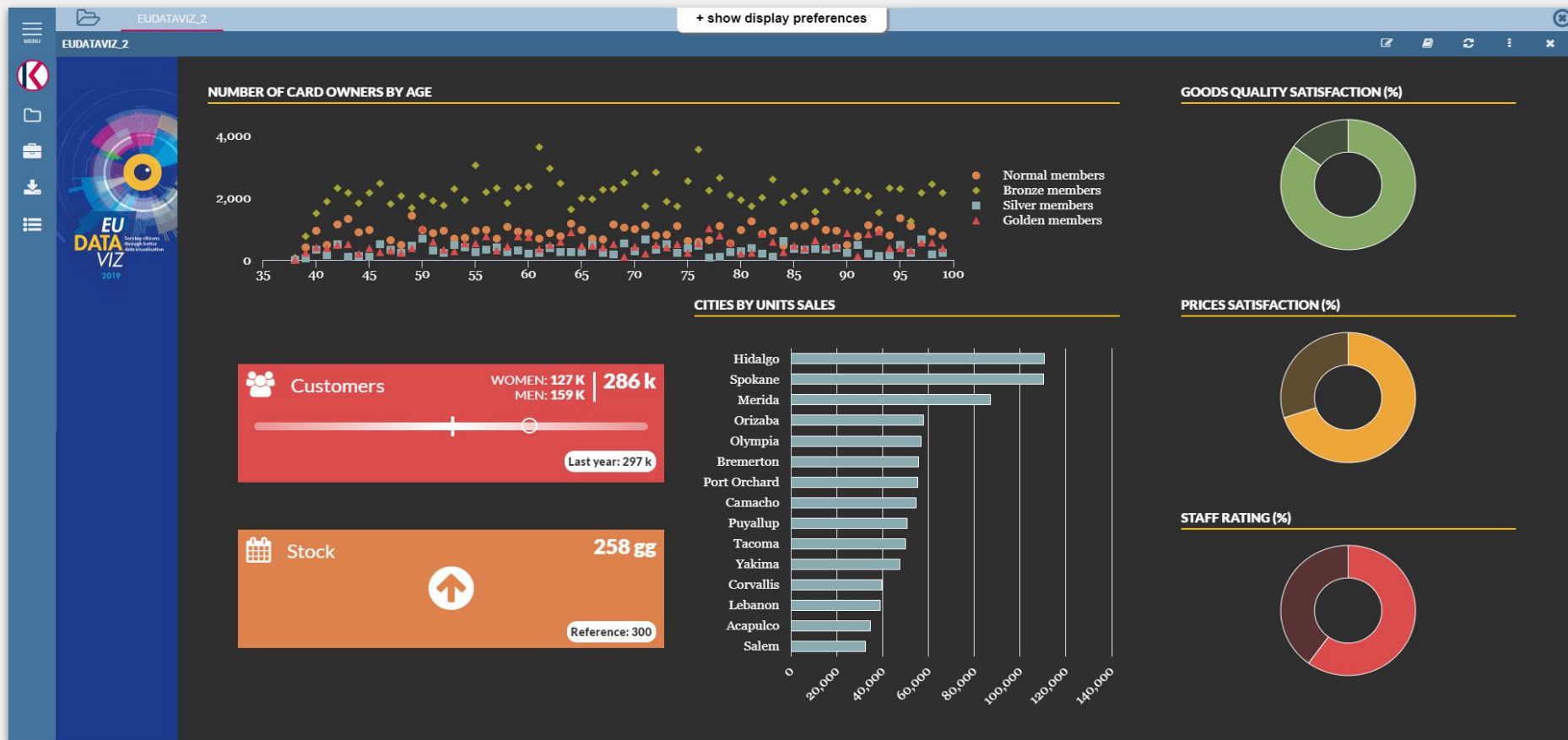
META WEB ☒ Enable Meta Web ☐ Lock model

SAVED VERSIONS

ACTIVE	FILE NA...	CREATOR	CREATI...
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KNOW/GE

9- Clear visibility



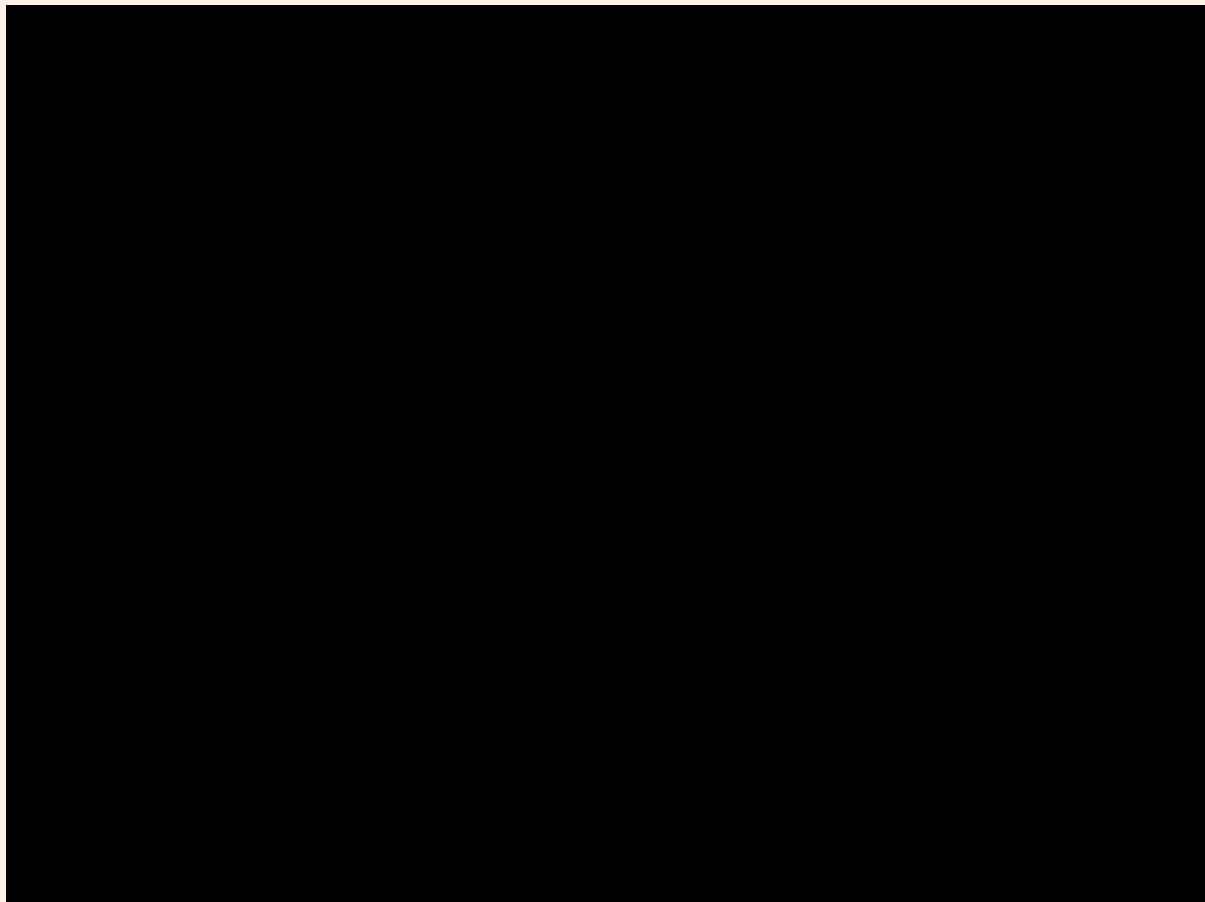


10- Sonification



11- Sonification





Conclusions



Links & Resources

Accessibility act

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2015%3A0615%3AFIN>

European health research

https://ec.europa.eu/health/sites/health/files/state/docs/2018_healthatglance_rep_en.pdf

Fluid project documentation

<https://docs.fluidproject.org>

Prosperity4all website

<http://www.prosperity4all.eu/>

ARIA w3c documentation

<https://w3c.github.io/using-aria/>

WCAG

<https://www.w3.org/WAI/standards-guidelines/wcag/>

Financial Times: Sonification: turning the yield curve into music

<https://www.ft.com/content/80269930-40c3-11e9-b896-fe36ec32aece>

Things I learned by pretending to be blind for a week

<https://silktide.com/blog/2013/things-i-learned-by-pretending-to-be-blind-for-a-week>

Accessible Rich Internet Applications (WAI-ARIA) 1.1

<https://www.w3.org/TR/wai-aria/>

ARIA in HTML

<https://www.w3.org/TR/html-aria/#sec-strong-native-semantics>

Beta Winds and Words (mouseless example)

<http://beta.wind-and-words.com/>

Colorblind friendly palette

<https://venngage.com/blog/color-blind-friendly-palette/>