# Designing PxWeb: User insights and accessibility

PX-MEETING IN HELSINKI, OCTOBER 2025



# Hei

- Maren
- UX and UI designer
- Statistics Norway
- Started working on the new PxWeb in January 2023



## **UX** and **UI**

- UX (user experience) is about how it feels to use something
- The research, structure, and flow making sure people can do what they need easily and intuitively
- UI (user interface) is about how it looks and works on the screen
- The colors, typography, components, animation the visual design people interact with



# Many factors influence design desicions

- Business: Goals that SSB and SCB have for the solution
- Research: User insights and user needs
- **Design rules:** Standards and conventions
- Other constraints: Resources and time, technical feasibility, existing systems, content, accessibility



# User insights and user needs

# User insights vs. user needs

- **User insights**: What we find out through research, for example: "Users struggle to understand table names"
- **User needs**: What users require to succeed, for example: "Users need clear and understandable table names"
- Insights are the findings. Needs are the requirements that come from those findings



# **User insights in PxWeb**

- We try to base all design decisions on user insights
- We want to make a product that helps users reach their goals in the best possible way
- A product that doesn't support the users' goals fails, no matter how polished it looks or how much functionality it offers



# **User insight sources**

- User testing (SSB og SCB)
- Free text responses from SSB annual user survey
- The information centre (SSB)
- Quantitative sources: Screen sizes, number of clicks, most used features, etc. (mostly SSB)



It is unclear what to click on to get a table with the variables you want.



Some tables are difficult to find based on their names, especially if you want to find statistics per municipality, age, gender, etc.



The font could be larger, and there could be better separation between the lines. I'm a student and very familiar with Statbank, but I doubt my mother would have figured it out. I think a better user interface would have made the experience easier.



See the selections and filtering you make "live" in a table



Make it possible to combine tables



# Find the pain points

- Don't look at each insight in isolation
- Gather all user insights and create an affinity diagram to identify patterns
- Analyze the patterns and write a pain point summary



# **Pain point summary**

- Not enough time to go through all the pain points now
- Some examples of user insights / pain points that have shaped the design of the starting page



# It is difficult for users to understand that the Statbank consists of tables

- Users believe they're accessing a large database of numbers that they can, in some way, extract based on what they need
- So when they're asked to "choose a table", it feels confusing, because how can they choose a table before they've even specified what kind of data they're looking for?
- Even after selecting a "table", users are confused because they don't actually see a table, they just see boxes



# Users can't find a table that has the "criteria" they are looking for

- It is difficult to know exactly where the numbers they are looking for are, as they only can navigate in a topic structure that might be organized in a way they don't understand or agree with
- The names of the tables can be difficult to understand and several tables can have almost identical names
- They don't understand what a table contains until they actually open it which means they have to open a lot of tables to find what they need

#### Welcome to PxWeb 2.0

Looking for the perfect table? Use the search field and filters to dig into the numbers you need. Whether you're hunting for trends, facts, or just an oddly satisfying dataset, PxWeb 2.0 has your back.

More about PxWeb ∨

#### Search in PxWeb 2.0

Q Search for table names or variables

#### **Filter**

Topic

Year

Time period

**Variable** 

#### 3,147 tables



 $\vee$ 

 $\vee$ 

Trends in volume and value of exports and imports of goods, change in percent. Month 2015M01-2025M07

2015-2025 Month

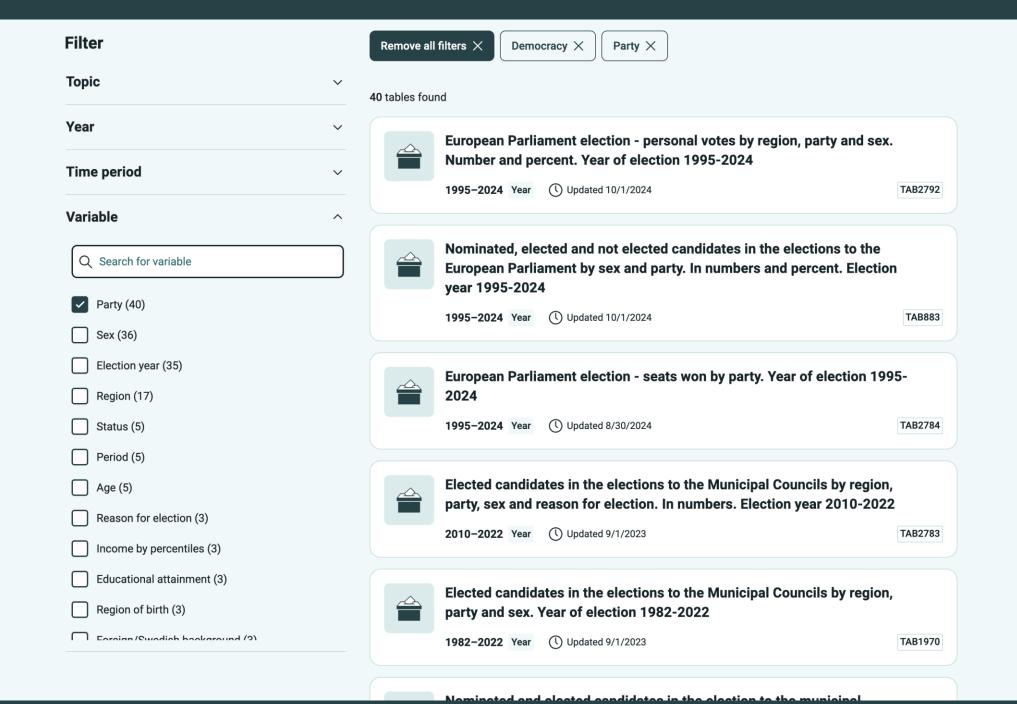
( Updated 9/26/2025

TAB6006



Imports and exports of goods by trading partner and commodity groups according to SITC rev3/rev4, Not adjusted for non response, confidential data excluded. Month 1995M01-2025M07

**1995–2025** Month (1) Updated 9/26/2025





#### Exploitation of peatlands by region and type of exploitation, in kilometers. Year 2020-2024

2020-2024 Year

(I) Updated 10/1/2025

TAB4634



#### Financial accounts by sector, item and counterpart-sector (ESA2010). Annually 1995-2024

1995-2024 Year

(1) Updated 9/30/2025

TAB1202



#### Financial accounts by sector, item and counterpart-sector (ESA2010). Quarterly 1996K1-2025K2

1996-2025 Quarter

( Updated 9/30/2025

TAB1203



#### General government debt by IMF. Quarter 2010K1-2025K2

2010-2025 Quarter

( Updated 9/30/2025

TAB1430



Number of ongoing employments by length of employment, sex and sector. Month 2015M04-2025M07

2015-2025 Month

(I) Updated 9/30/2025





## Air emissions by industry SNI 2007 (NACE) and subject. Quarter 2008K1-2025K1

2008-2025 Quarter

Updated 8/28/2025

**TAB4349** 



Air emissions by industry SNI 2007 (NACE) and subject. Year 2008-2023

2008-2023 Year

(\) Updated 3/27/2025





## Air emissions by industry SNI 2007 (NACE) and subject

2008-2025 Quarter

Updated 8/28/2025

**TAB4349** 



#### Air emissions by industry SNI 2007 (NACE) and subject

2008-2023 Year

( Updated 3/27/2025



# Keep learning and improving

- There is still a lot to address in the backlog. Functionality that is not yet implemented and things that we know need improving
- A launch doesn't mean the work is done it's the start of learning how people actually use what we've built



# **Accessibility and WCAG**

# Accessibility vs. WCAG

- Accessibility is about making digital products usable for everyone – regardless of ability, disability, or context
- WCAG (Web Content Accessibility Guidelines) is the "rulebook" for web accessibility. It gives concrete guidelines and measurable criteria to help achieve accessibility
- Accessibility is the goal WCAG helps us get there



# **Accessibility in PxWeb**

- Accessibility is complex, because it involves many layers: design choices, code structure, interaction patterns, and assistive technologies
- Good help from an external WCAG consultant
- Show a few examples of have we have worked with accessibility, organized around four main principles of WCAG: Perceivable, operable, understandable, and robust



# Perceivable

- Information must be presented in ways people can actually perceive, no matter their abilities
- For example, providing text alternatives for non-text content, ensuring sufficient color contrast, and allowing users to zoom or enlarge text



Q Search for table names or variables

#### **Filter**

Topic

Agriculture, forestry and fishery (12)

☐ Business activities (226)

Democracy (146)

Education and research (281)

**Energy** (36)

Annual energy statistics (electricity, gas, district heating) (13)

Annual energy statistics (13)

Electricity prices and electricity contracts (8)

Gas prices and gas contracts
(3)

Monthly electricity statistics,

Annual energy statistics (... imes

13 tables found



Gross generation, installed generator capacity and number of plants. Year 2015-2023

**2015–2023** Year ① Updated 10/24/2024

TAB4063



Number of grid output points by area of use (NACE Rev.2) and bidding zone. Year 2015-2023

TAB4061



Consumption of fuels for steam and hot water production, by type of fuel and type of production type. Yearly 1990-2023

**TAB853** 



Consumption of fuels in electricity generation by type of commodities and power plant. Year 1990-2023





Home > Agriculture, fc... Show more

## Livestock by observations, year, type of animal and region

i Information

#### Livestock 2007

#### dairy cows

01 Stockholm county 4,475

#### cows for calf production

01 Stockholm county 3,630

#### heifers, bulls and steers









?

Help





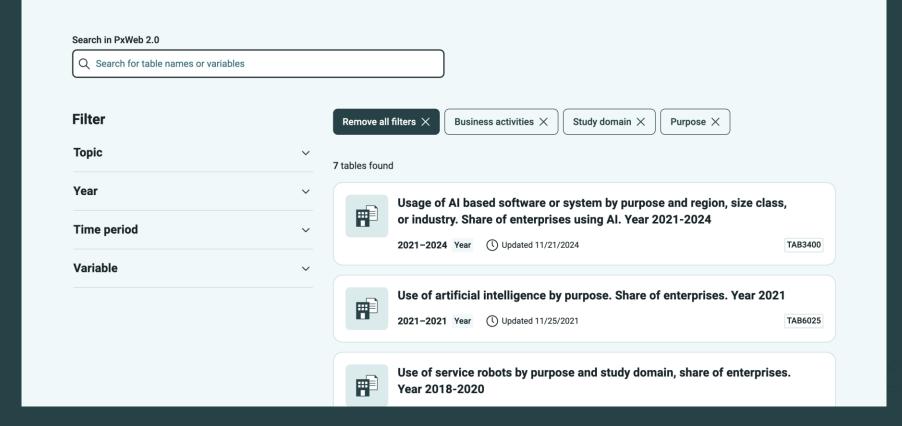




#### Welcome to PxWeb 2.0

Looking for the perfect table? Use the search field and filters to dig into the numbers you need. Whether you're hunting for trends, facts, or just an oddly satisfying dataset, PxWeb 2.0 has your back.

More about PxWeb ~



hunting for trends, facts, or just an oddly satisfying dataset, PxWeb 2.0 has your back.

More about PxWeb ∨



Q Search for table names or variables

**≆** Filter

Remove all filters  $\times$ 

Business activities imes

Study domain  $\times$ 

Purpose ★

7 tables found



Usage of Al based software or system by

### Screen reader

Rotate table clockwise, button

## **Customize**



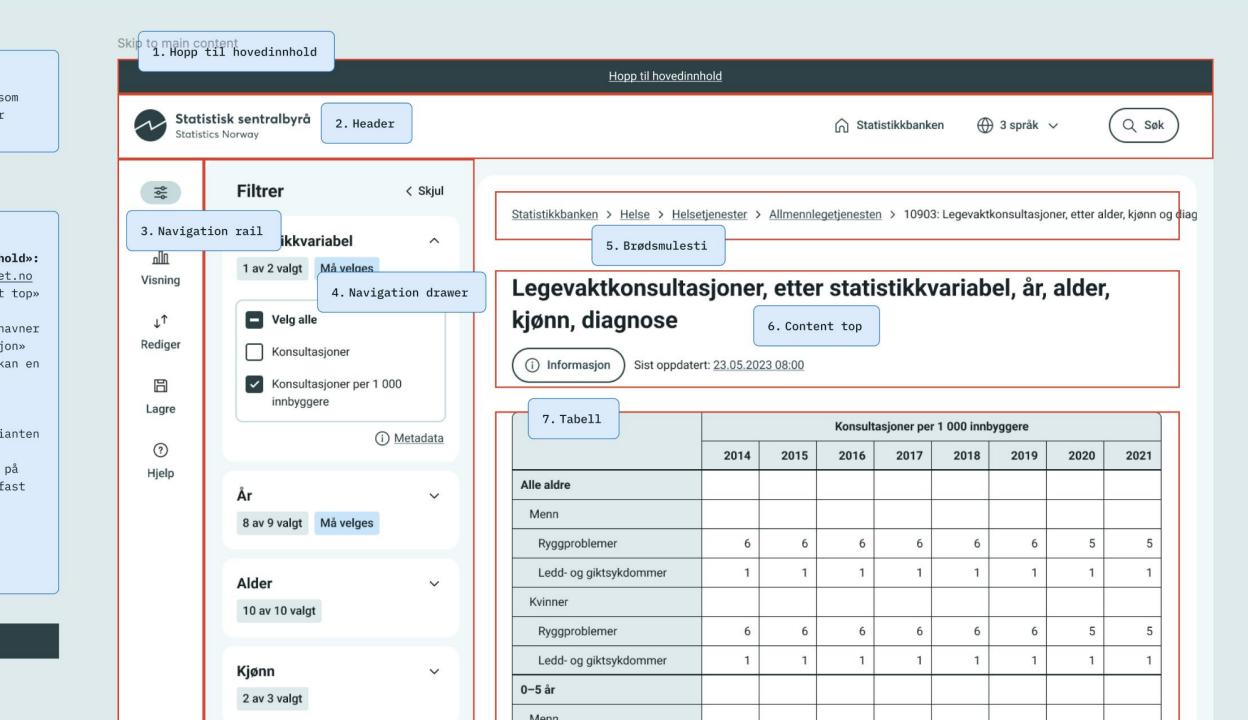
More tools for editing the table are under construction.



# **Operable**

 Users must be able to navigate and interact with the interface, regardless of how they do it – with a mouse, keyboard, touch, or assistive technologies





jon»

TAB4617



#### Welcome to PxWeb 2.0

Looking for the perfect table? Use the search field and filters to dig into the numbers you need. Whether you're hunting for trends, facts, or just an oddly satisfying dataset, PxWeb 2.0 has your back.

More about PxWeb >

#### Search in PxWeb 2.0

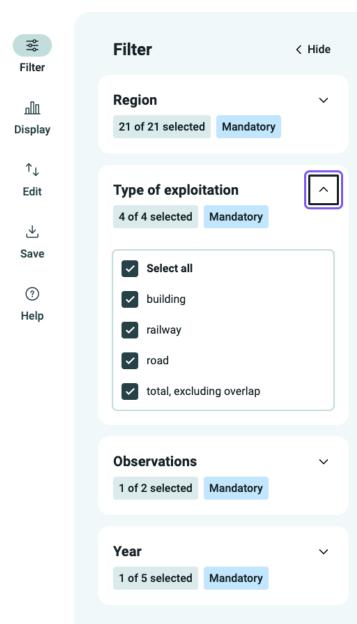
Q Search for table names or variables

# Topic Exploitation of wetlands by region and type of exploitation, in hectares. Year 2020-2024 Year Updated 10/1/2025 TAB4312 Time period Exploitation of wetlands by region and type of exploitation, in kilometers. Year 2020-2024 Year Year 2020-2024

2020-2024 Year

( Updated 10/1/2025





<u>Home</u> > <u>Environment</u> > <u>Sustainable Development indicators</u> > <u>Thriving Wetlands</u> > Exploitation of wetlands by region and type of exploitation, in hectares. Year 2020-2024

# Direct exploitation, in hectares by region, observations, year and type of exploitation

(i) Information Last updat

Last updated: 10/1/2025, 8:00 AM

		direct exploitation	on, in hectare	s		
	2024					
	building	railway	road	total, excluding overlap		
01 Stockholm county	7	6	50	63		
03 Uppsala county	3	5	63	71		
04 Södermanland county	3	4	38	46		
05 Östergötland county	3	5	99	107		
06 Jönköping county	9	12	181	202		
07 Kronoberg county	2	4	131	136		
08 Kalmar county	3	3	81	87		
09 Gotland county	0	0	4	4		
10 Blekinge county	0	1	19	20		





<u>n∭</u> Display

↑<sub>↓</sub> Edit

> ⊥ Save

?

Help

Home > Transport and communications > Registered vehicles > Registered vehicles > Vehicles in use by region and type of vehicles. Year 2002-2024

# Vehicles in use, number by region, observations, year and type of vehicle

(i) Information

Last updated: 2/13/2025, 8:00 AM

	2002															
	passenger cars	light lorries	heavy lorries	towing vehicles	buses	motorcycles	mopeds class 1	tractors	snowmobiles	all- terrain vehicles	cross- country scooters	passenger cars	light lorries	heavy lorries	towing vehicles	1
00 Sweden	4,042,792	332,777	76,163	6,737	14,013	174,507	19,380	327,672	0	0	151,620	4,075,414	346,405	75,156	6,667	1
01 Stockholm county	738,471	66,816	12,022	621	2,585	26,025	2,523	12,242	0	0	6,993	746,671	71,631	11,956	587	
03 Uppsala county	132,325	11,792	2,277	69	562	5,702	459	11,624	0	0	2,549	129,258	10,939	2,204	81	
04 Södermanland county	120,562	10,014	1,823	124	487	5,859	568	8,773	0	0	1,267	121,929	10,463	1,798	130	
05 Östergötland county	182,474	15,182	3,780	152	644	9,082	966	15,957	0	0	1,273	184,082	15,601	3,611	158	
06 Jönköping county	154,012	12,280	3,045	211	548	8,019	684	17,424	0	0	1,231	155,632	12,690	3,001	219	
07 Kronoberg county	85,982	7,021	1,935	207	344	4,237	421	11,198	0	0	629	86,313	7,305	1,875	194	
08 Kalmar county	113,973	8,912	2,146	170	612	5,877	606	14,971	0	0	670	114,776	9,375	2,124	189	
09 Gotland county	30,413	3,231	578	57	96	1,456	276	5,969	0	0	135	30,872	3,392	591	55	
10 Blekinge county	74,251	4,903	1,124	151	223	4,285	595	6,634	0	0	213	74,923	5,157	1,096	150	
12 Skåne county	517,569	38,406	10,589	1,582	1,440	24,429	3,807	37,270	0	0	1,184	522,636	39,172	10,333	1,578	
13 Halland county	137,367	11,191	2,783	461	359	7,053	1,464	13,432	0	0	555	139,554	11,779	2,785	450	
14 Västra Götaland county	664,770	52,723	13,080	1,710	2,269	30,567	3,088	58,525	0	0	3,798	671,104	54,574	12,866	1,610	
15 former Älvehorg																

# Understandable

- Users must be able to comprehend both the interface and the content of interface
- The interface should never confuse the user



# Understandable

- Content and instructions must be written in clear and simple language
- Navigation and layout should be predictable and consistent
- Users should always understand what will happen when they click a button or make a choice
- Error messages must be helpful and easy to follow, guiding users to fix problems



# Robust

• Content must be reliable and compatible across different browsers, devices, and assistive technologies



## Robust

- Semantic HTML helps ensure that screen readers and other tools can interpret the content correctly (proper use of <h1>-<h6>,
   , , <button> etc.)
- The interface adapts to different screen sizes and devices
- Every interactive element has a clear name, role, and state/value in the code
- Status messages must be announced to assistive technologies

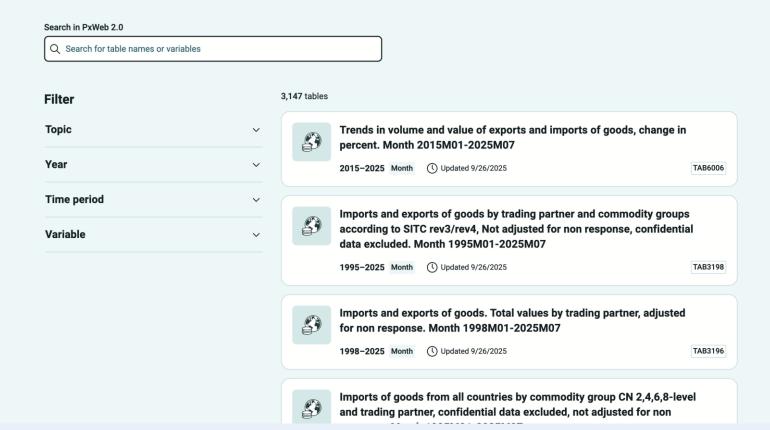




#### Welcome to PxWeb 2.0

Looking for the perfect table? Use the search field and filters to dig into the numbers you need. Whether you're hunting for trends, facts, or just an oddly satisfying dataset, PxWeb 2.0 has your back.

More about PxWeb ∨



### Family type

^

5 of 5 selected

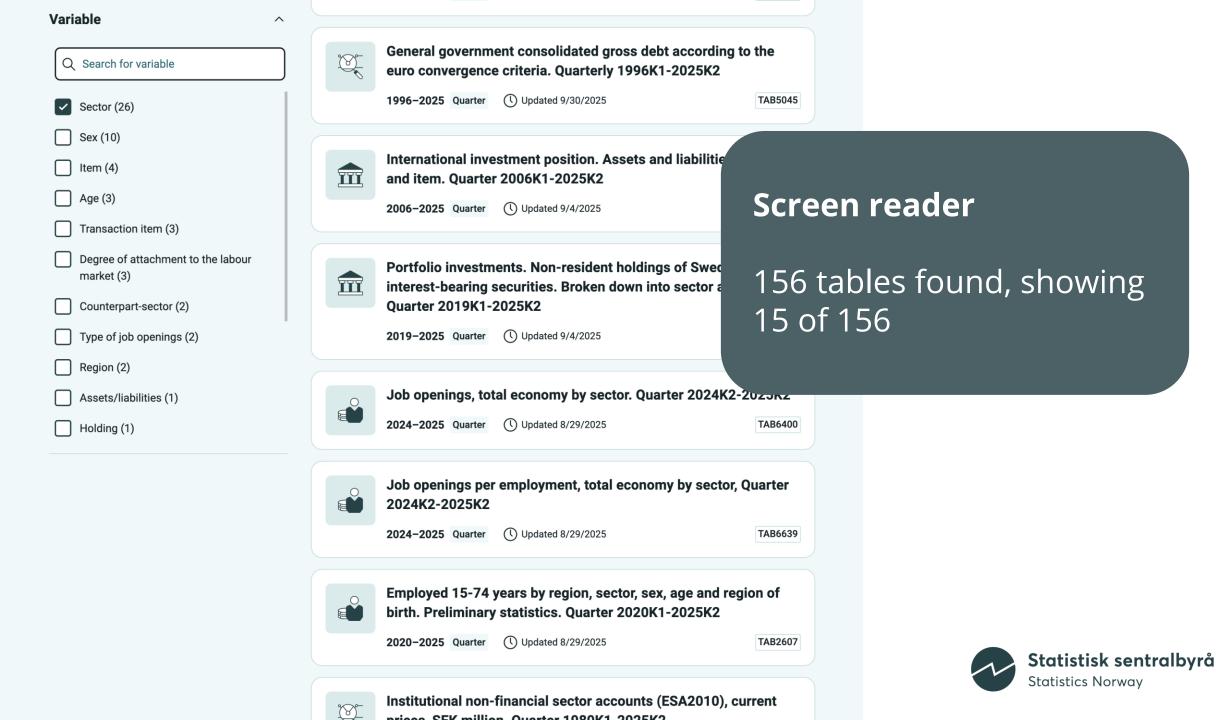
Mandatory

- Select all
- single without children
- single with children
- married or cohabiting without children
- married or cohabiting with children
- ✓ living at home

#### Screen reader

Family type, 5 of 5 selected, mandatory, expanded, button





# WCAG vs. real-life accessibility

- We have worked systematically to meet the WCAG requirements,
   but we still have some unsolved issues in our backlog
- A product can be "WCAG correct", but still confusing, overwhelming or hard to navigate for real users
- That's why we still need to do user testing meeting the WCAG requirements alone is not enough to ensure accessibility



# Kiitos!

