

Selected work

Joseph Aas Cooper

DHIS2

Design Lead

Leading design at DHIS2, I am responsible for the user experience of the applications, extensible platform, design system and more.

DHIS2 is the world's largest health information management system. It is open-source, free and used by more than 73 countries worldwide to manage national health systems.

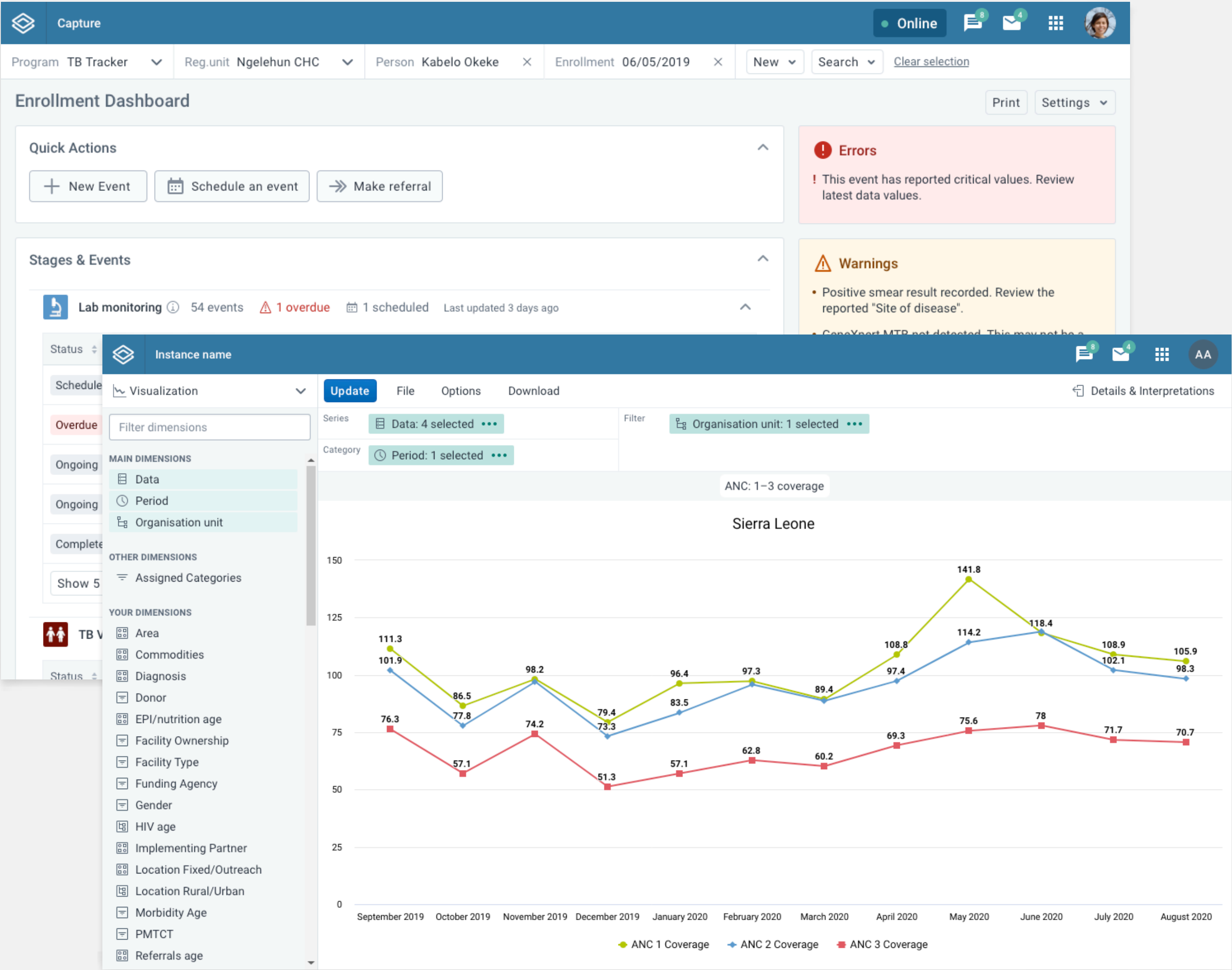
DHIS2 Application Design

Designing for global use

At DHIS2, I designed applications that enable countries to collect, analyse and manage their national health data. Leading redesign projects for several of the most-used applications, I worked to include existing and new use cases in understandable, accessible interfaces.

I established a library of patterns and common interfaces to encourage consistency across the DHIS2 platform. This consistency reduces the training required and helps people work effectively.

DHIS2 applications are critical for health and education data management in many countries. Designing for these use cases, it's essential to understand and work within the balance between user needs and real-world constraints.



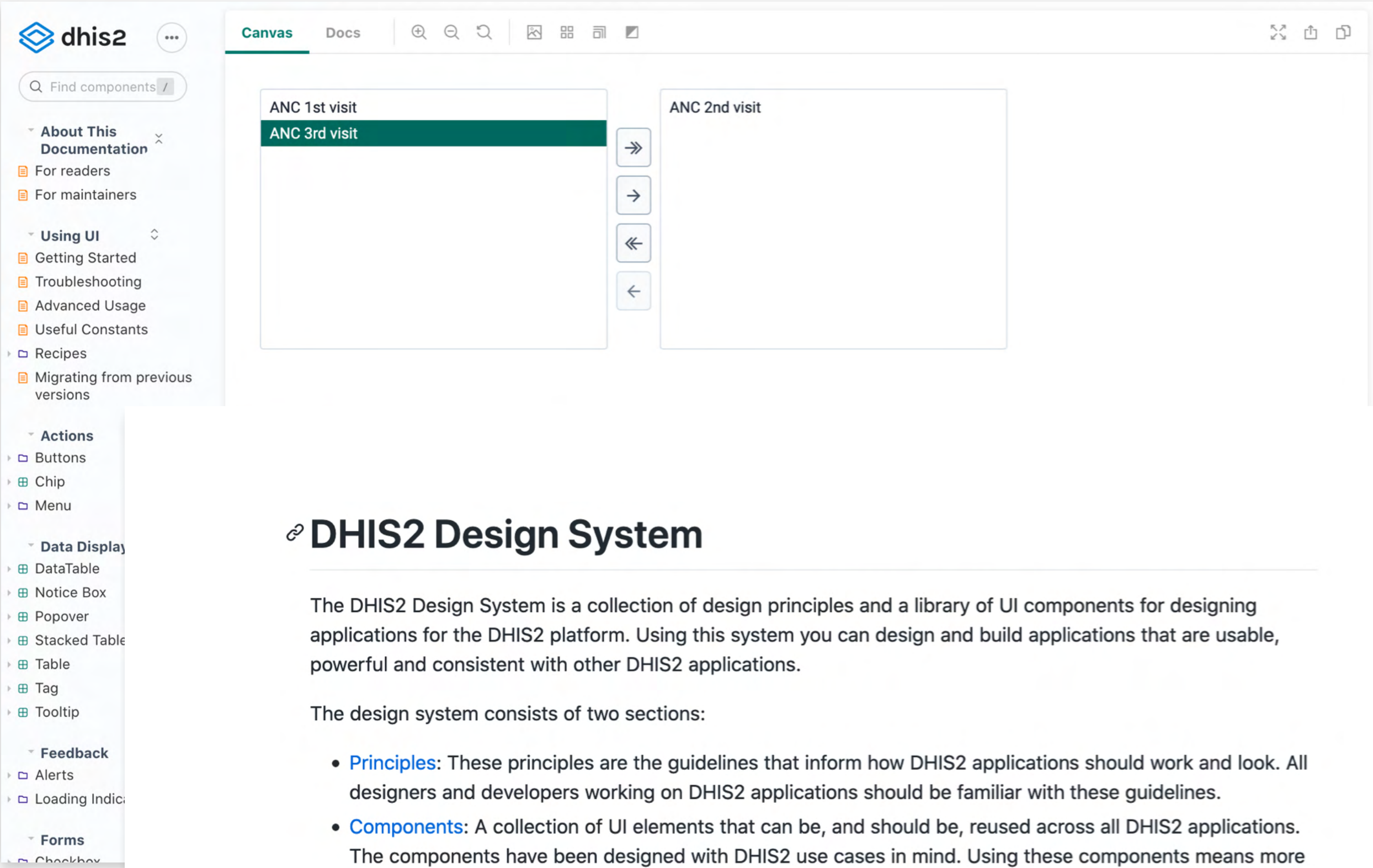
DHIS2 Design System

Facilitating good design

I established, managed and maintained the DHIS2 design system. The system includes DHIS2-specific components that establish a baseline of consistency across applications.

As well as the component usage guidelines, the system includes design principles that encourage the development of user-friendly, useful and accessible applications.

Both internal DHIS2 and open-source developers worldwide use the design system components and principles to build applications for the DHIS2 platform.



🔗 DHIS2 Design System

The DHIS2 Design System is a collection of design principles and a library of UI components for designing applications for the DHIS2 platform. Using this system you can design and build applications that are usable, powerful and consistent with other DHIS2 applications.

The design system consists of two sections:

- [Principles](#): These principles are the guidelines that inform how DHIS2 applications should work and look. All designers and developers working on DHIS2 applications should be familiar with these guidelines.
- [Components](#): A collection of UI elements that can be, and should be, reused across all DHIS2 applications. The components have been designed with DHIS2 use cases in mind. Using these components means more time spent focusing on building a positive user experience and less time redesigning and rebuilding common components. Each component has its guidelines for use.

Design System Contents

- [Principles](#)
- [Components](#)

Using the system

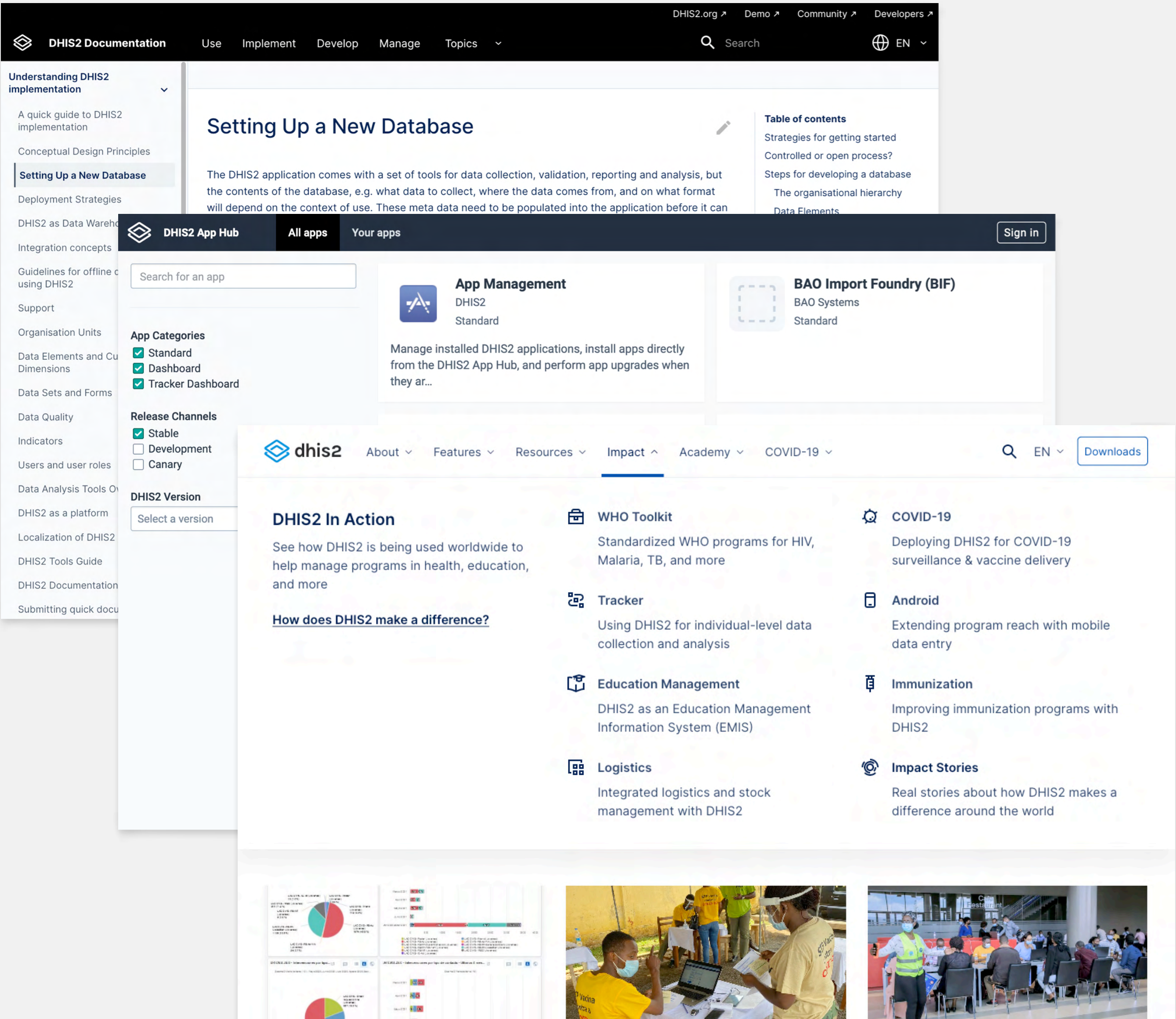
- [Designing DHIS2 applications](#)
- [Resources](#)
- [Contributing and Feedback](#)

DHIS2 Organisation

Leading design efforts

As the first designer to join the DHIS2 team, I established and led multiple design efforts, including projects like:

- Designing accessible, easy to explore DHIS2 documentation.
- Redesigning the DHIS2 App Hub, an open-source marketplace of DHIS2 applications.
- Redesigning the DHIS2 organisation website.
- Establishing a modern DHIS2 identity and branding system.



Northern Beat

Senior Interaction Designer

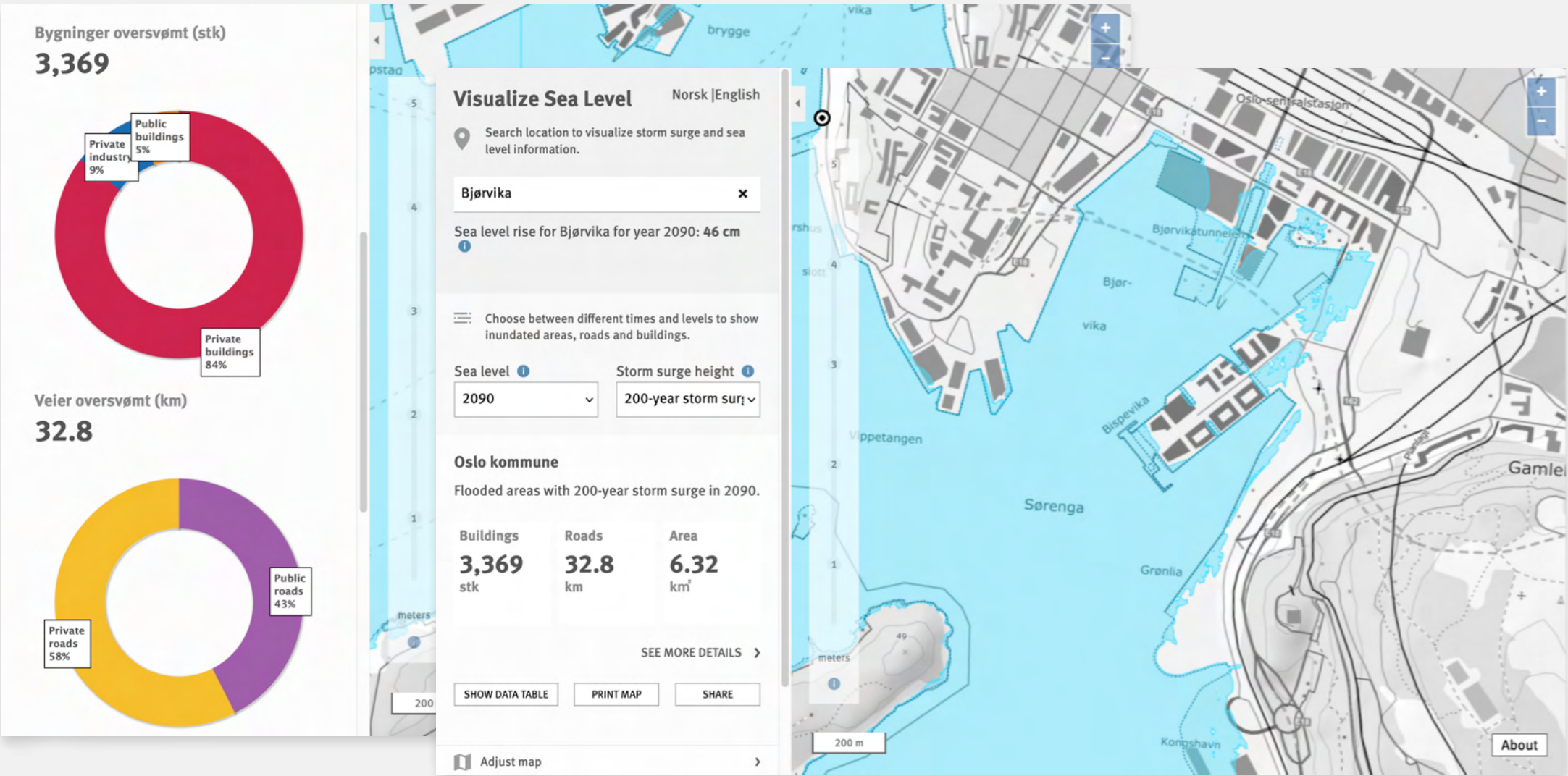
As a senior interaction design consultant for Northern Beat, I worked with companies across the Norwegian public sector to build accessible, useful tools for public benefit.

Client: Kartverket

Visualising climate change

I worked with Kartverket, the Norwegian Mapping Authority, to build a tool to help people understand the potential damage of rising sea levels.

Working with a design team at Northern Beat, I was responsible for the user experience and interaction design.

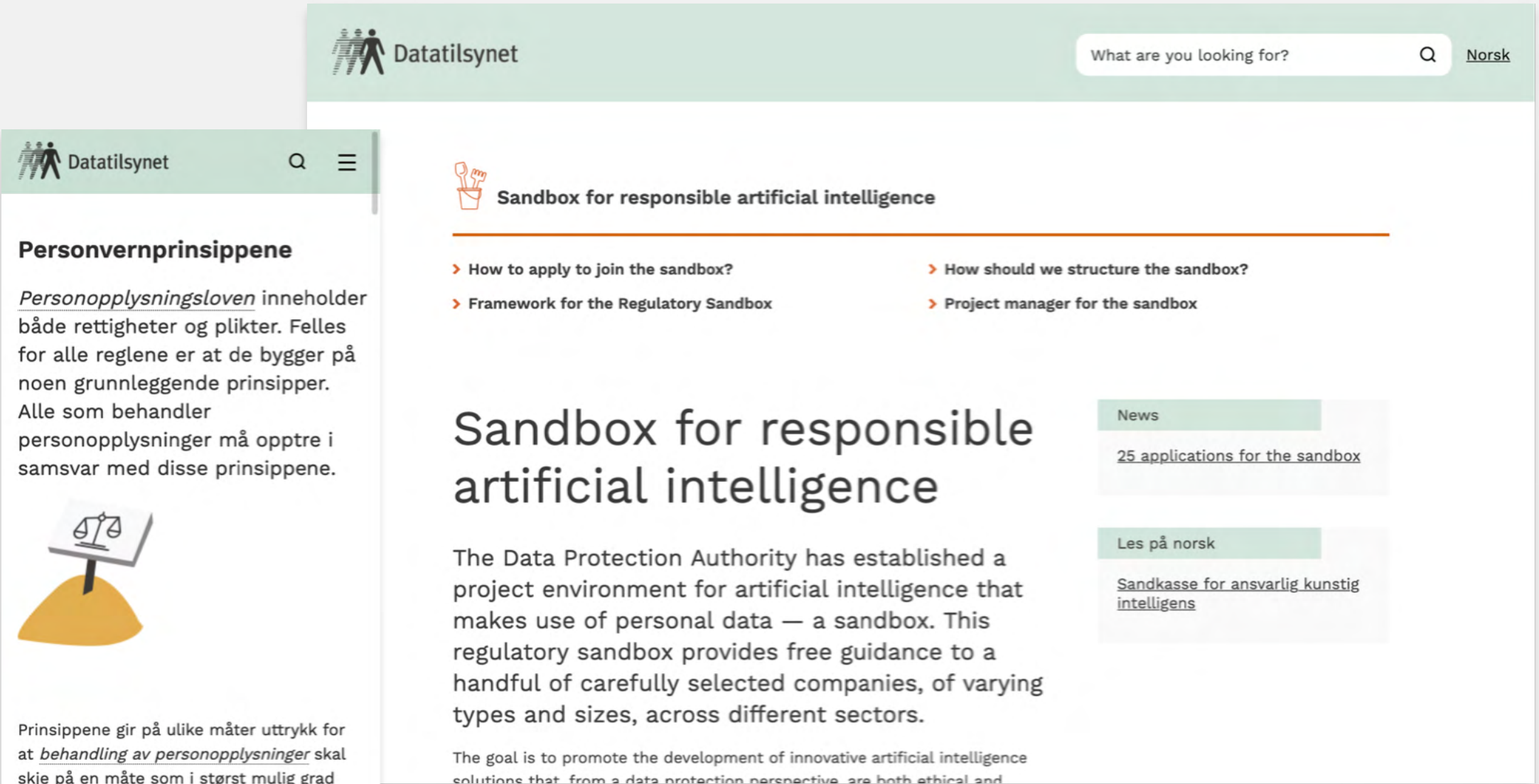


Client: Datatilsynet

Accessible privacy

I worked with Datatilsynet, the Norwegian Data Protection Authority, to redesign their website to make information about privacy rights approachable and accessible.

Working with a design team at Northern Beat, I was responsible for the user experience and visual design.



Veam Studios

Design and Development Lead

I led design and development for a bootstrapped startup building consumer and enterprise iOS and Android applications that helped people work more effectively.

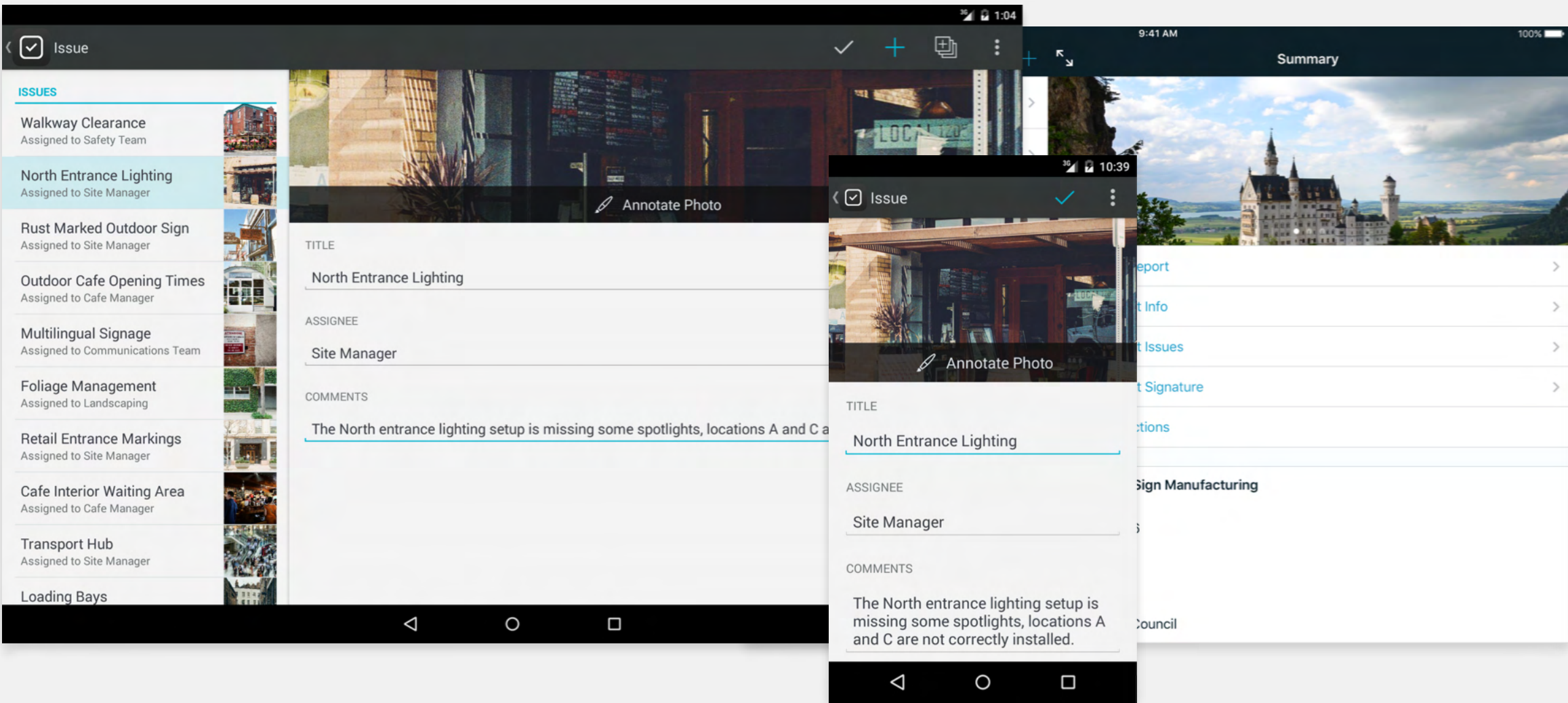
Veam Studios / Site Audit Pro

Learning by doing

I led the design and development of several consumer and enterprise mobile applications, including Site Audit Pro, which consistently ranks in the top 10 iOS Productivity apps.

I was responsible for all design and development, establishing a design system, visual language and interaction workflows for iOS and Android applications.

Taking the company from a bedroom side project to a profitable company taught me valuable lessons about working across disciplines and applying the principles of good design in development and business settings.



“This app is a great asset to everyone from site managers through to the site operatives...This app is so easy to use I wonder how I managed without it.”

“Great product, quick and simple to use when on site. Do not know what I did before, it saves hours of my time.”

“This is an excellent app, does exactly what it says on the tin and more. Really easy to use and makes site inspections almost effortless.”

“Great app, no nonsense, saving a lot of time and paperwork. Highly recommended. A must have app.”

Working practices

How I work

I believe that clear communication is the key to building successful products. I enjoy working in an environment that encourages contributions and collaboration across all teams.

How I work

Documenting design

In my experience, communicating design solutions is an integral part of the product development process. Complex solutions require well-written documents that provide a single source of truth for multiple teams.

Writing documentation is an important part of my design process, where I communicate how solutions work across all possible use cases and situations.

Design Specification: Maintenance

P2. Object list

Version 1.0, 21/06/21

Produced by Joe Cooper

Changelog

Version 1.0, 21/06/21

Page title

The page title displays the title of the current page. Page titles are documented for each group [here](#). The page title does not have a maximum width.

Object table

The object table displays the objects for the selected group. The object table area does not have a maximum width. There is a standard object table, used for most metadata groups and objects, its design and functionality are [documented below](#).

Filters

The filters area provides filtering controls for the object table. The filter area has a fixed width of 220px and is always placed to the right of the object table. Filtering functionality is [documented below](#).

Object table

The majority of the metadata object types are displayed using a standard object table. Unless otherwise specified, the following specifications apply. The object table uses a ui *Data table* component with [selectable rows](#).

The object has three main areas: [header](#), [rows](#) and footer.

Header

download button

- Download filter(s)).
- Download

Triggering a menu [documented below](#)

Action: Manage column

Button with label *Manag* modal dialog. This functionality is [documented below](#).

Action: New object

Button with label *New \$object* (e.g. *New data element*, *New indicator*). The icon used is ui *Add24*. Triggering the button navigates to the **new object form** for the currently selected object type.

Filter status

How I work

Prototyping ideas

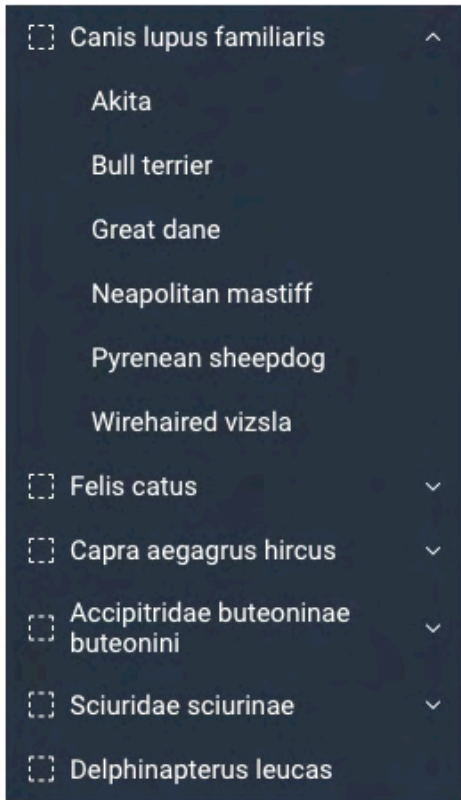
Different design problems demand different prototyping methods. Early ideas might work best explored with clickable wireframes to understand a concept. Exploring the details of a specific component might call for a real, working prototype to test interactions across different environments and platforms.

I am comfortable working with industry-standard tools like Sketch, Figma and Framer. I build prototypes using HTML, CSS, JS and React, and I am comfortable exploring a codebase to understand the possibilities and limitations of potential solutions.

EXAMPLE

Two-level, with icons

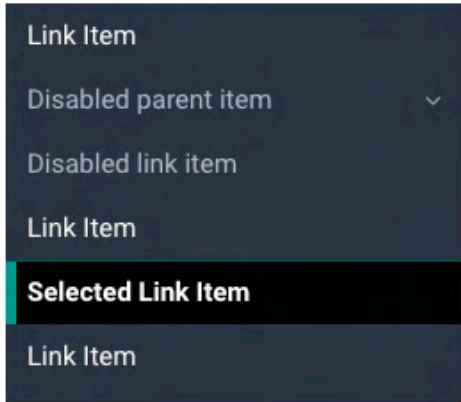
DEMO



EXAMPLE

Item states

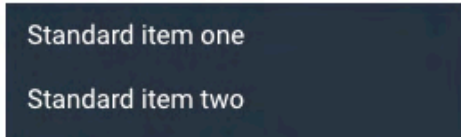
DEMO



EXAMPLE

Custom item content

DEMO



```
JS sidenav.js 1, M X
src > components > JS sidenav.js > [S] Sidenav
1 import React from 'react'
2 import './sidenav.css'
3 import { CssReset, Tag, LogoWhite } from '@dhis2/ui-core'
4 import { IconChevronDown16, IconEmptyFrame16 } from '@dhis2/ui-icons'
5
6 import { DevExample } from '../assets/DevExample.js'
7
8 const Sidenav = ({props}) => <div class="sidenav-wrap">{props.children}</div>
9
10 const SidenavItems = (props) => <ul class="sidenav-items">{props.children}</ul>
11
12 const SidenavHeader = (props) => (
13   <div class="sidenav-header">{props.children}</div>
14 )
15
16 const SidenavFooter = (props) => (
17   <div class="sidenav-footer">{props.children}</div>
18 )
19
20 const SidenavParent = (props) => {
21   const [showResults, setShowResults] = React.useState(false)
22   const toggleChildren = React.useCallback(() => {
23     setShowResults((showResults) => !showResults)
24   }, [])
25   return (
26     <>
27       <li
28         class={
29           `sidenav-parent
30             ${props.icon ? ' sidenav-parent-has-icon' : ''}
31             ${showResults ? ' parent-is-open' : ''}
32           `
33         >
34         <button onClick={toggleChildren} disabled={props.disabled}>
35           {props.icon ? (
36             <span class="sidenav-item-icon">{props.icon}</span>
37           ) : (
38             ''
39           )}
36
```

How I work

Cross-discipline collaboration

I believe that designing solutions to hard problems requires understanding those problems from all possible viewpoints.

In pursuit of that goal, my design process is open and transparent. Different stakeholders work in different ways. Walkthrough videos are great for including stakeholders across different time zones and disciplines. Written documentation serves as a useful reference throughout a project. Breaking a design solution down into prioritised tasks can help development teams see what needs to be done and when. I strive to work in ways that encourage and enable open collaboration.

Proposal: conceptual model

Input –the data to be listed

- Tracked Entity Type or Program

Conditions –the filters/manipulations to be applied to the input

- Period
- Organisation unit
- Program (if input is Tracked Entity Type)
- Attributes
- Relationships
- Dynamic dimensions

Output –the attributes and data displayed in a table, not necessarily included as conditions



Age 15y interval
Height in cm
Immunization coverage
Reporting rates

Refresh list Add new

→
→
←
←

ANC Coverage
Age 10y interval

↑ ↓

Aggregation levels

Visualize values for this data element in Analytics apps. Multiple legends can be applied.

Filter available levels

Chiefdom
Facility
National

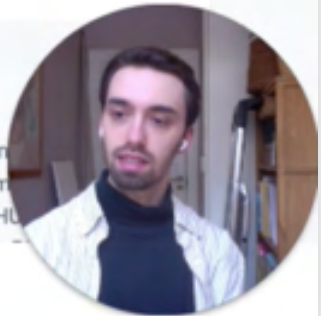
→
→
←

Selected levels
District

Save changes Exit without saving

Aggregation levels

By default, the aggregation will start at the lowest assigned organisation unit. If you for example select "Chiefdom", it means "Chiefdom", "District", and "National" aggregates use "Chiefdom" as the data source, and PHU (highest aggregation level available) as the data source, and PHU



Thank you.

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