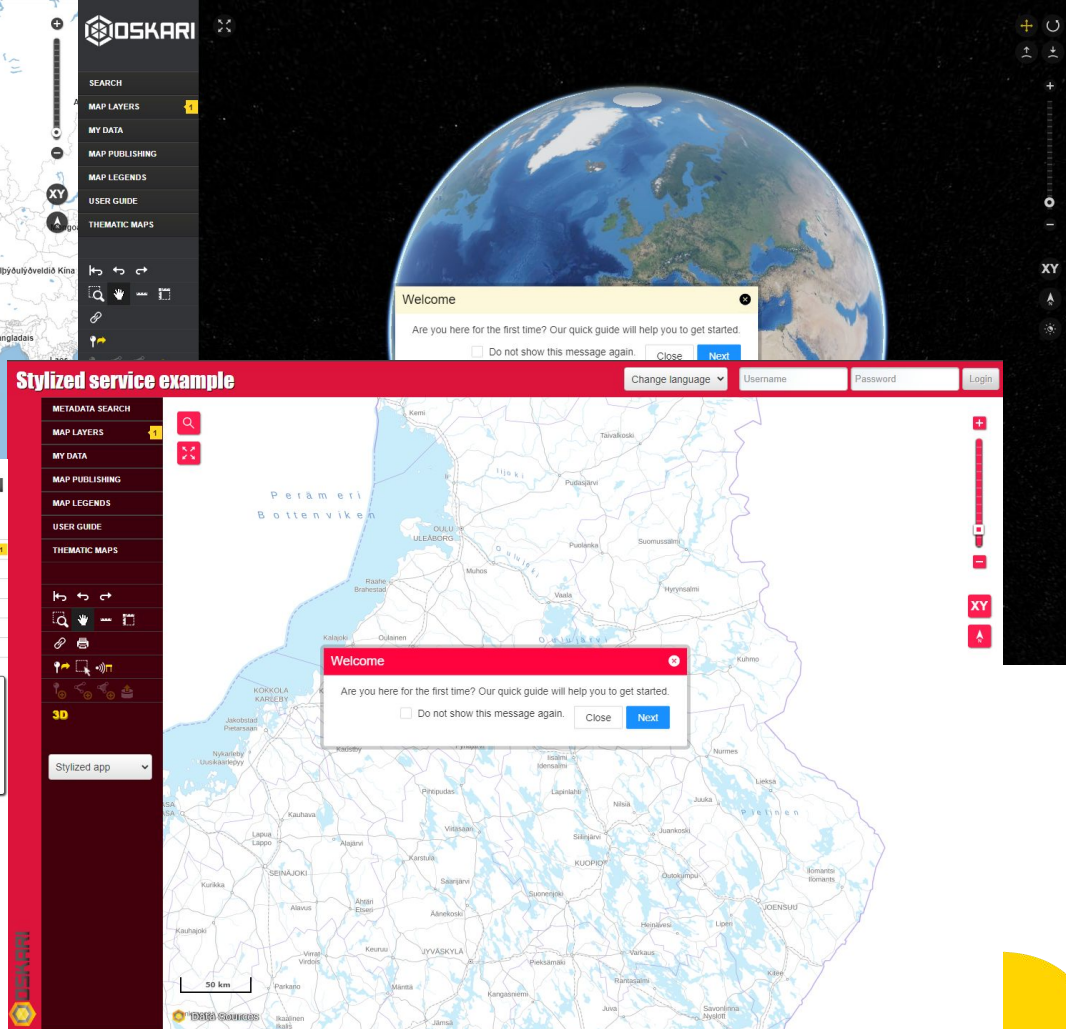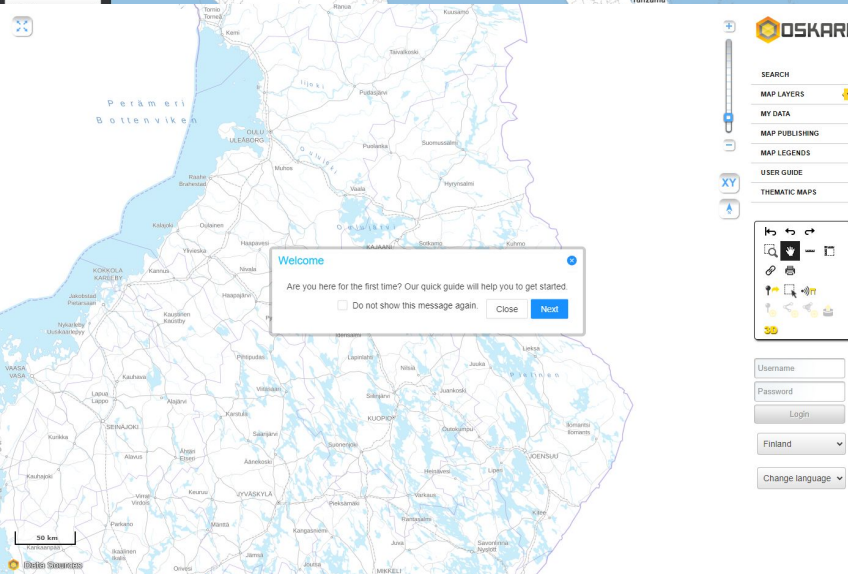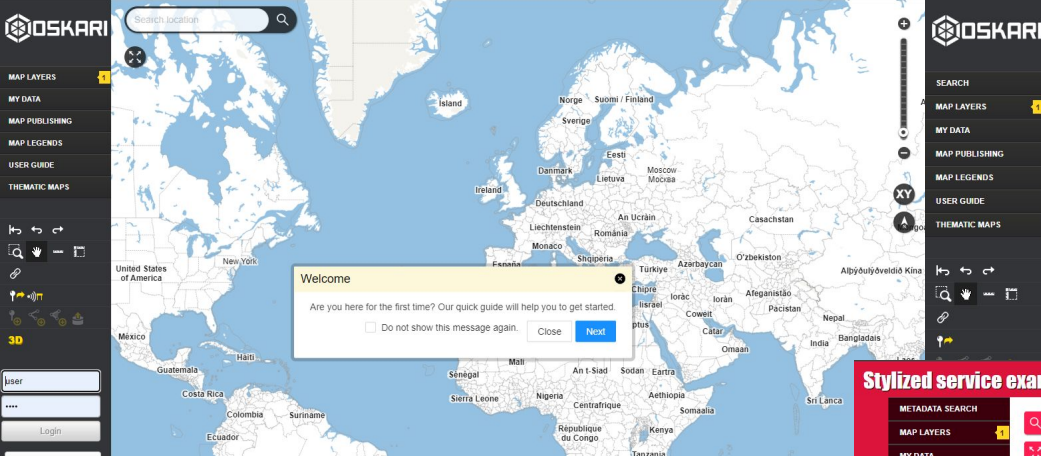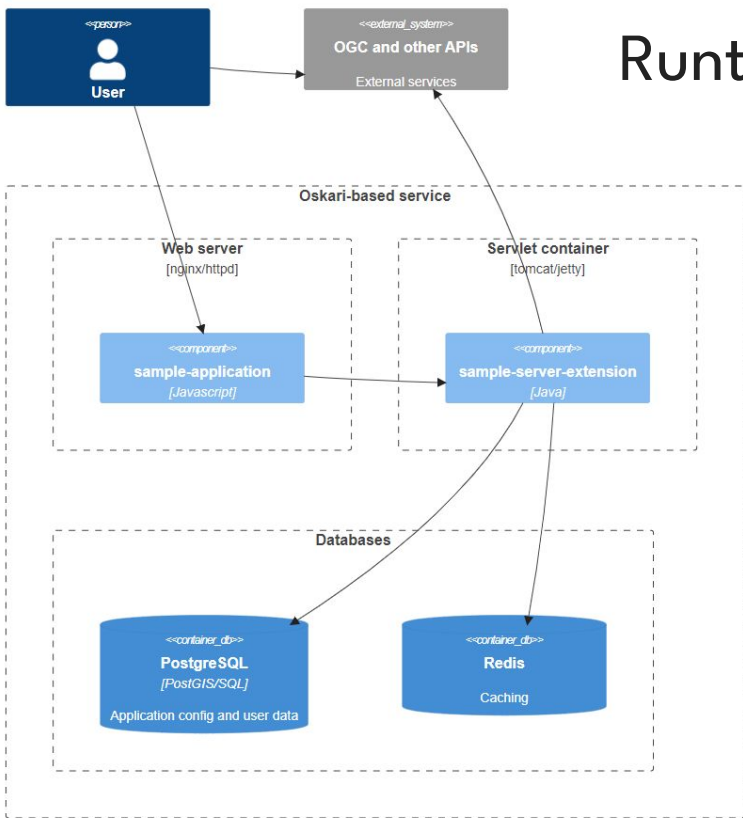# Oskari for developers

Oskari - developer perspective

- Quick start using downloadable zip with bundled Tomcat
- Light-weight customization using sample-application/server:
  - Template repository as base for customized applications
  - Application customization
  - Adding custom functionalities
- Version upgrades usually easy to do:
  - Bump dependency version
  - Automatic database migrations
  - Change log on oskari.org:
    - What's new / changed
    - Migration guide
    - https://oskari.org/documentation/docs/3.1.0/12-Changelog
- When doing changes or new functionalities, consider if it could be included in the Oskari repositories
  - Pull requests are accepted
  - Can be easier way to document/maintain functionalities
  - Let others benefit as well

Search location

OSKARI

MAP LAYERS
MY DATA
MAP PUBLISHING
MAP LEGENDS
USER GUIDE
THEMATIC MAPS

3D

user
••••
Login

Welcome
Are you here for the first time? Our quick guide will help you to get started.
☐ Do not show this message again.
Close   Next

OSKARI

SEARCH
MAP LAYERS
MY DATA
MAP PUBLISHING
MAP LEGENDS
USER GUIDE
THEMATIC MAPS

Welcome
Are you here for the first time? Our quick guide will help you to get started.
☐ Do not show this message again.
Close   Next

XY

OSKARI

SEARCH
MAP LAYERS
MY DATA
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USER GUIDE
THEMATIC MAPS

3D

Username
Password
Login

Finland
Change language

Welcome
Are you here for the first time? Our quick guide will help you to get started.
☐ Do not show this message again.
Close   Next

XY

Stylized service example

Change language   Username   Password   Login

METADATA SEARCH
MAP LAYERS
MY DATA
MAP PUBLISHING
MAP LEGENDS
USER GUIDE
THEMATIC MAPS

3D

Stylized app

Welcome
Are you here for the first time? Our quick guide will help you to get started.
☐ Do not show this message again.
Close   Next

XY

50 km

Perämeri
Bottenviken

Data Sources

Runtime environment

- Java-based web app
  - Tomcat/Jetty
  - PostgreSQL(+PostGIS)
  - Redis
- Javascript SPA
- API-integrations:
  - WMS/WMTS/WFS etc OGC-APIs
  - Vector tile
  - Bing, ArcGIS
  - Statistical data PxWeb, SotkaNET
  - Search backend

Main configuration file: **oskari-ext.properties**

```
# change to match your database connection parameters
db.url = jdbc:postgresql://localhost:5432/oskaridb
db.username = oskari
db.password = oskari
```

Overrides using ENV-variables:

```
OSKARI_DB_URL=jdbc:postgresql://somehost:5432/somedb
OSKARI_DB_USERNAME=someuser
OSKARI_DB_PASSWORD=passwd
```

Open source

https://github.com/oskariorg

- sample-server-extension
  - oskari-server
- sample-application
  - oskari-frontend
  - oskari-frontend-contrib
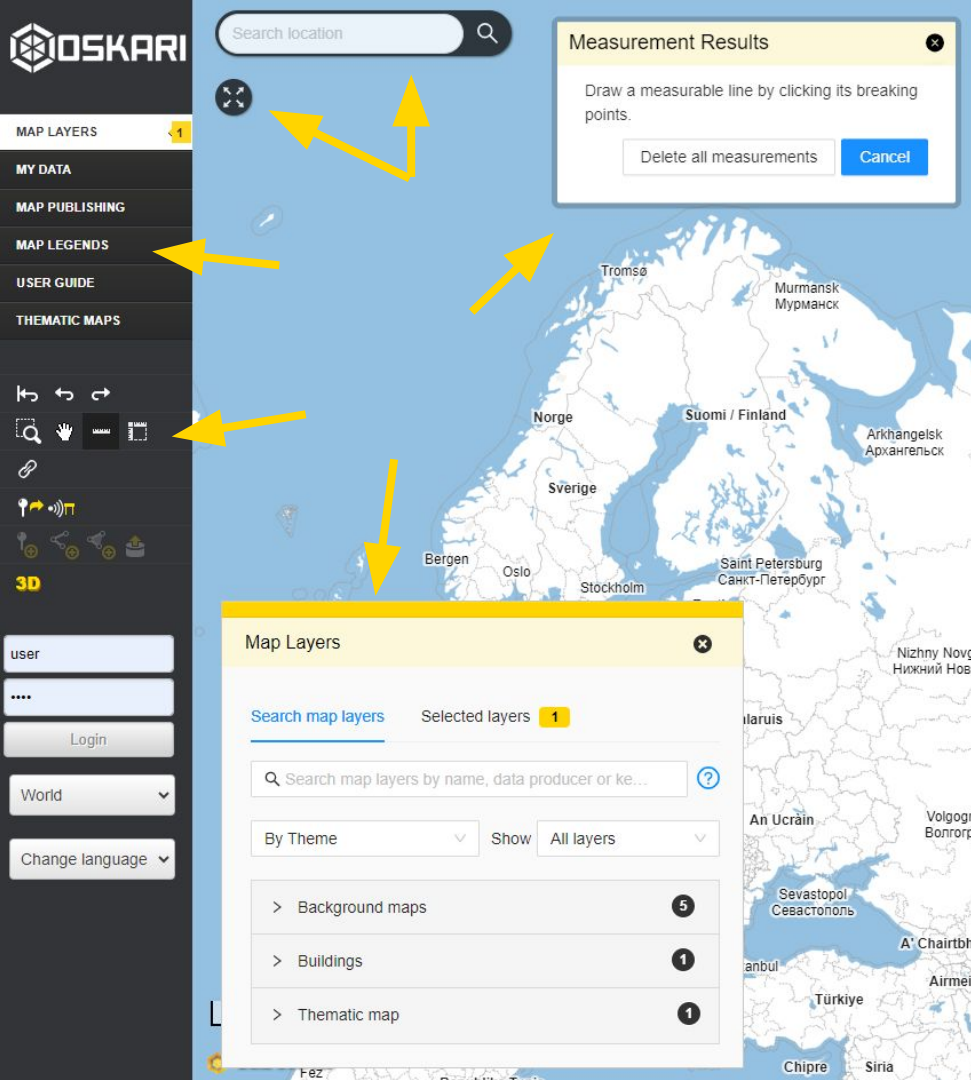
UI-concepts

- "tile"
- "flyout"
- "bundle"
- "app setup"
- "popup"
- "toolbar"
- "plugin"
- "event"
- "request"
- "action route"

Customization: default content/functionality setup

master ▾ | **sample-server-extension** / app-resources / src / main / resources / flyway / **example** /

🔍 Go to file   Add file ▾ …

ZakarFin Migrate styles to new structure   6740d24 · last year   🕐 History

Name	Last commit message	Last commit date
..		
V1_0_0__initial_dataproviders.sql	Restore Oskari.org as data provider	4 years ago
V1_0_1__initial-users.sql	Update migrations for 2.x table names	4 years ago
V1_0_2__register-sample-info-bundle.sql	Update migrations for 2.x table names	4 years ago
V1_1_0__register-regionset-countries.sql	Countries SRS 4326 -> 3857	4 years ago

Customization: default content/functionality setup

Customization

- App setup
  - Theme
  - Functionalities

[sample-server-extension/](#)

[app-resources/src/main/](#)

[resources/json/apps/](#)

[geoportal-3067.json](#)

```
{
  "name" : "Finland",
  "type" : "DEFAULT",
  "default" : true,
  "public" : true,
  "onlyUuid" : false,
  "oskari" : {
    "application" : "geoportal",
    "page" : "geoportal_white",
    "development_prefix" : "/applications",
    "metadata": {
      "theme": {
        "color": {
          "header": {
            "bg": "#ffffff",
            "text": "#00BFFF",
            "icon": "#1E90FF"
          },
          "primary": "#ffffff",
          "accent": "#00BFFF",
          "text": "#000000"
        },
        "navigation": {
          "color": {
            "primary": "#FFFFFF"
          }
        }
```

```
{ "id" : "infobox" },
{ "id" : "statehandler" },
{ "id" : "search" },
{ "id" : "metadatasearch" },
{ "id" : "layerlist" },
{ "id" : "coordinatetool"},
{ "id" : "metadataflyout" },
{ "id" : "mydata" },
{ "id" : "publisher2" },
{ "id" : "maplegend" },
{
  "id" : "userguide",
  "config" : {
    "tags" : "userguide",
    "flyoutClazz" : "Oskari.mapframework.b
  }
},
{ "id" : "guidedtour" },
{ "id" : "sample-info" },
{ "id" : "myplaces3" },
{ "id" : "printout" },
{ "id" : "maprotator" },
{ "id" : "myplacesimport" },
{
```

Oskari 3.x and beyond

- Java version updated from 8 to 17
  - Can be run with more recent versions as well.
- Frontend loader changes
  - packages/*/bundle.js on their way out, new way: bundles/*/index.js
  - https://github.com/oskariorg/oskari-frontend/pull/2886
  - locales automagically detected
- New base bundle:

```
import { BasicBundleInstance } from 'oskari-ui/BasicBundleInstance';

class MyBundleInstance extends BasicBundleInstance {
    start () {
        console.log('Hello world')
    }
}

Oskari.bundle('hello-world', () => new MyBundleInstance());
```

Example integration: search

Concept: SearchChannel

Backing service for search can be anything really:

- Nominatim OpenStreetMap
- MML Geokoodauspalvelu
- WFS-services
- Any custom backend

Searching using coordinates/reverse geocoding also an option.

Oskari-development

Developed using pull requests through GitHub

- oskari-frontend
- oskari-server

Changelog/migration guides for applications:

- Release notes
- Migration guide
- Template application repository
- (Paikkatietoikkuna repository github.com/nls-oskari)

Possible to ask questions in Gitter chat, for example

Thank you!

- **Website**: https://oskari.org/

- **GitHub**: https://github.com/oskariorg/

- **LinkedIn**: Oskari - Open Source

- **Email**: info@oskari.org

OSKARI