Seamap Australia 2022

14 Oct. 2022 16:25:52

Purpose

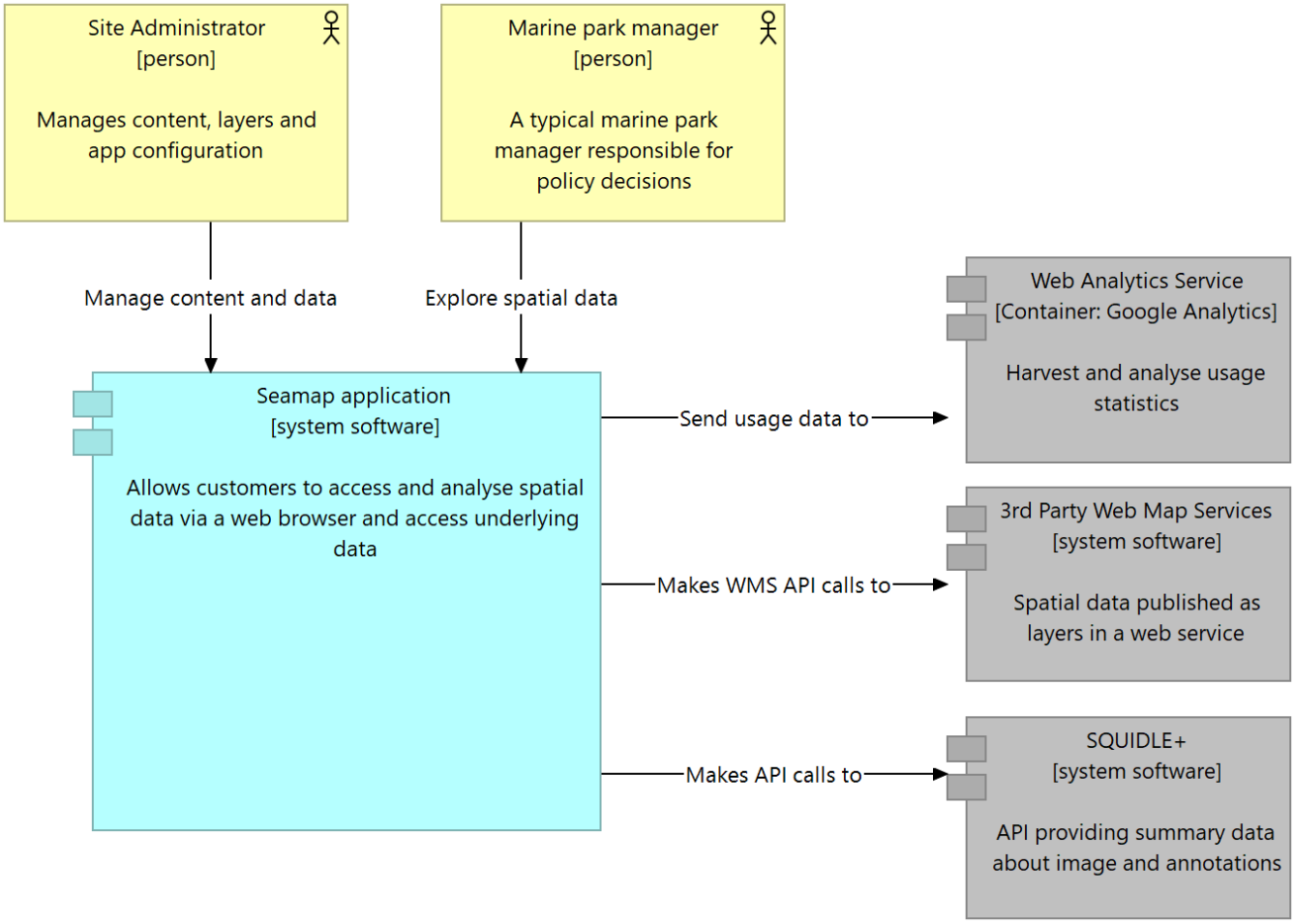
Diagrams showing key aspects of the Seamap Australia application

Based on
https://c4model.com/

Views

L1) Context Diagram

No viewpoint



Documentation

Level 1: A System Context diagram provides a starting point, showing how the software system in scope fits into the world around it.

Scope: A single software system.

Primary elements:
The software system in scope.

Supporting elements:
People (e.g. users, actors, roles, or personas) and software systems (external dependencies) that are directly connected to the software system in scope. Typically these other software systems sit outside the scope or boundary of your own software system, and you don’t have responsibility or ownership of them.

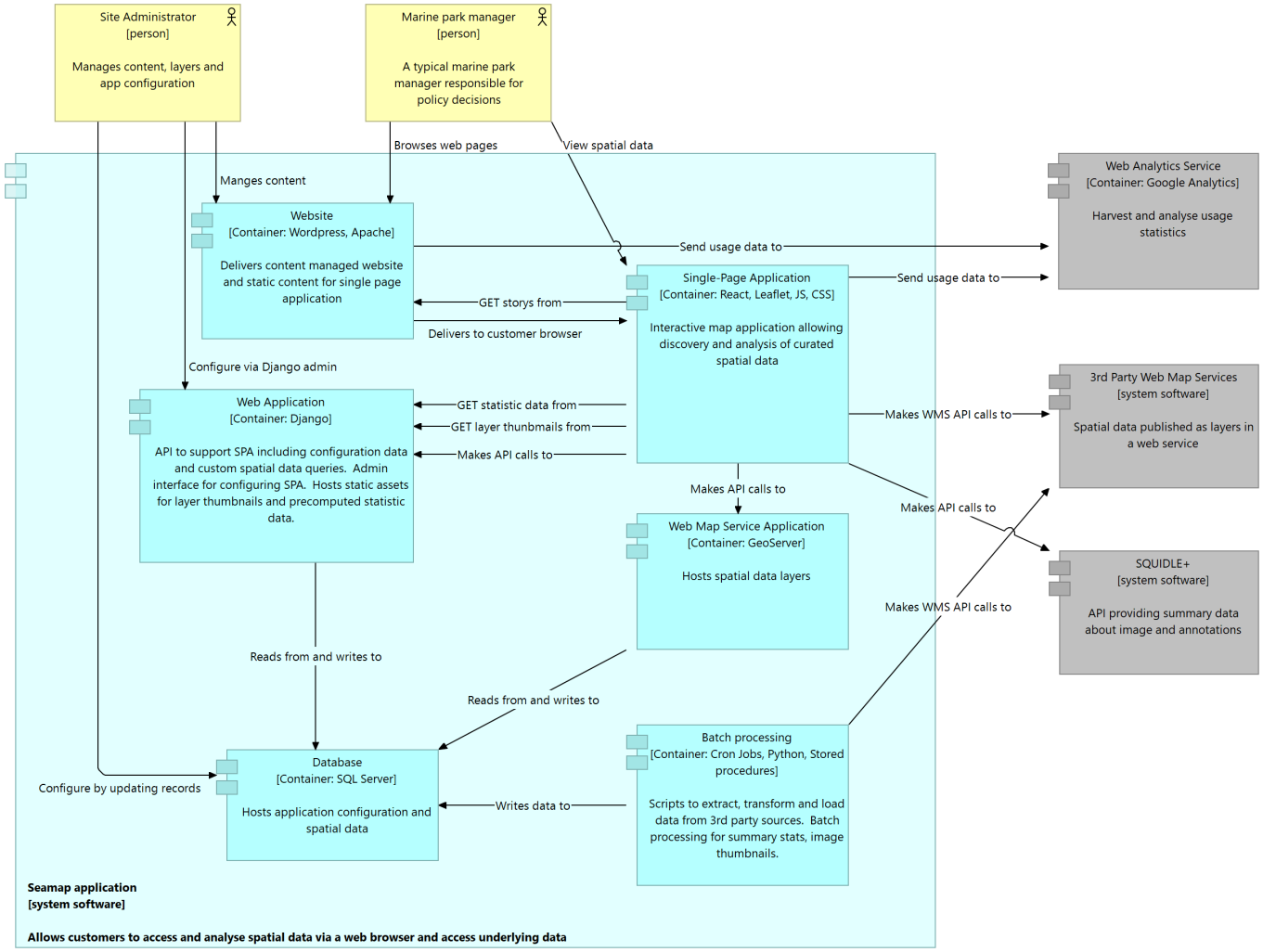
Intended audience:
Everybody, both technical and non-technical people, inside and outside of the software development team.

Elements

Element	Type
3rd Party Web Map Services	Application Component
Marine park manager	Business Actor
Seamap application	Application Component
Site Administrator	Business Actor
SQUIDLE+	Application Component
Web Analytics Service	Application Component

L2) Container diagram - Seamap Application

No viewpoint



Documentation

Level 2: A Container diagram zooms into the software system in scope, showing the high-level technical building blocks.

Scope: A single software system.

Primary elements:
Containers within the software system in scope.

Supporting elements:
People and software systems directly connected to the containers.

Intended audience:
Technical people inside and outside of the software development team; including software architects, developers and operations/support staff.

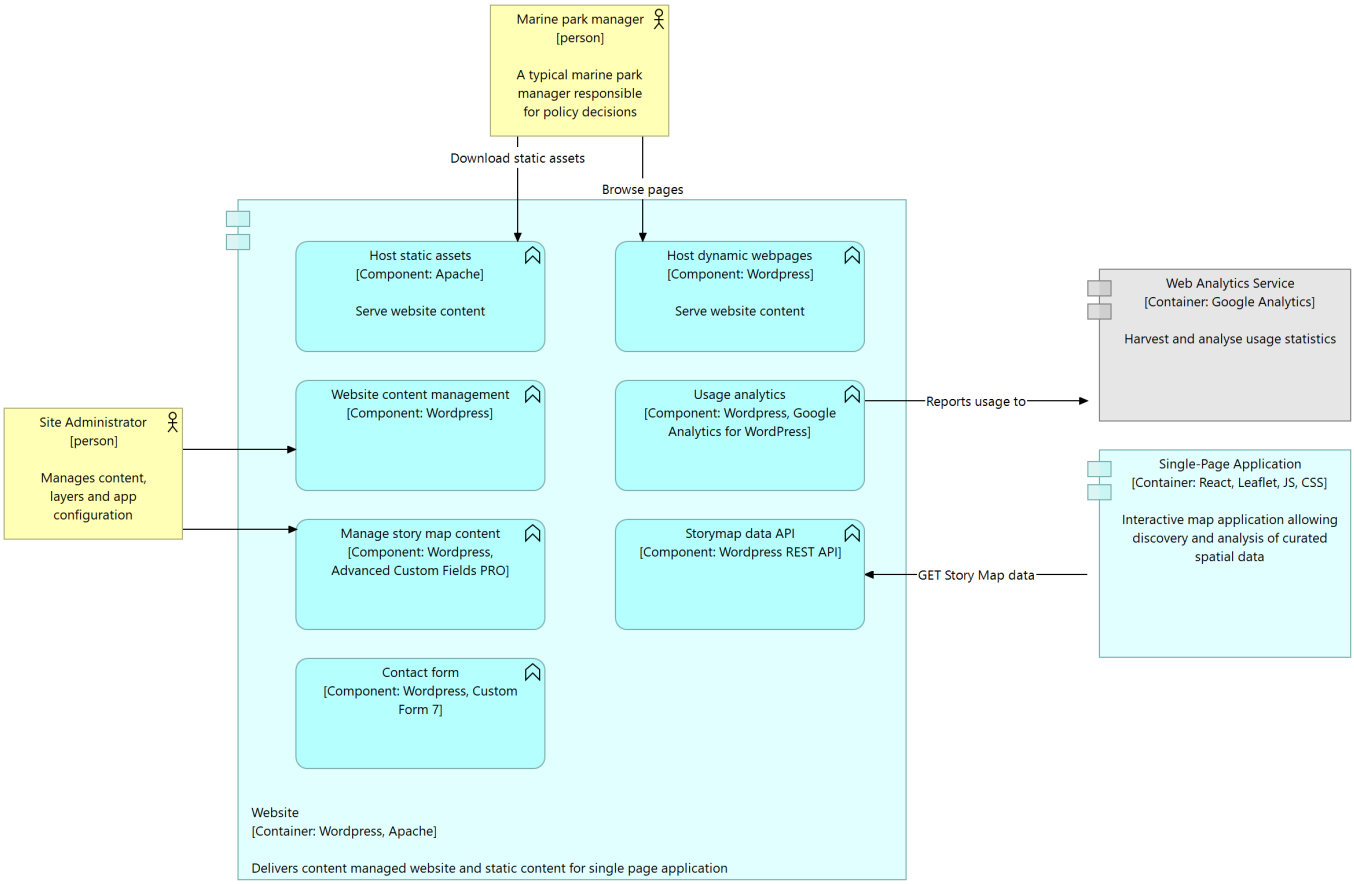
Elements

Element	Type
3rd Party Web Map Services	Application Component

Element	Type
Batch processing	Application Component
Database	Application Component
Marine park manager	Business Actor
Seamap application	Application Component
Single-Page Application	Application Component
Site Administrator	Business Actor
SQUIDLE+	Application Component
Web Analytics Service	Application Component
Web Application	Application Component
Web Map Service Application	Application Component
Website	Application Component

L3) Component diagram - Website

No viewpoint



Documentation

The Component diagram shows how a container is made up of a number of "components", what each of those components are, their responsibilities and the technology/implementation details.

Scope: A single container.

Primary elements:
Components within the container in scope.
Supporting elements: Containers (within the software system in scope) plus people and software systems directly connected to the components.

Intended audience:
Software architects and developers.

Elements

Element	Type
Contact form	Application Function
Host dynamic webpages	Application Function
Host static assets	Application Function
Manage story map content	Application Function

Element	Type
Marine park manager	Business Actor
Single-Page Application	Application Component
Site Administrator	Business Actor
Storymap data API	Application Function
Usage analytics	Application Function
Web Analytics Service	Application Component
Website	Application Component
Website content management	Application Function

Business Layer

Marine park manager

Type	Business Actor

> A typical marine park manager responsible for policy decisions

Site Administrator

Type	Business Actor

> Manages content, layers and app configuration

Application Layer

3rd Party Web Map Services

Type	Application Component

Spatial data published as layers in a web service

Batch processing

Type	Application Component
Technology	Cron Jobs, Python, Stored procedures

Scripts to extract, transform and load data from 3rd party sources. Batch processing for summary stats, image thumbnails.

Contact form

Type	Application Function
Technology	Wordpress, Custom Form 7

Database

Type	Application Component
Technology	SQL Server

Hosts application configuration and spatial data

Host dynamic webpages

Type	Application Function
Technology	Wordpress

Serve website content

Host static assets

Type	Application Function
Technology	Apache

Serve website content

Manage story map content

Type	Application Function
Technology	Wordpress, Advanced Custom Fields PRO

Seamap application

Type	Application Component

Allows customers to access and analyse spatial data via a web browser and access underlying data

Single-Page Application

Type	Application Component
Technology	React, Leaflet, JS, CSS

Interactive map application allowing discovery and analysis of curated spatial data

SQUIDLE+

Type	Application Component

API providing summary data about image and annotations

Storymap data API

Type	Application Function
Technology	Wordpress REST API

Usage analytics

Type	Application Function
Technology	Wordpress, Google Analytics for WordPress

Web Analytics Service

Type	Application Component
Technology	Google Analytics

Harvest and analyse usage statistics

Web Application

Type	Application Component
Technology	Django

API to support SPA including configuration data and custom spatial data queries. Admin interface for configuring SPA. Hosts static assets for layer thumbnails and precomputed statistic data.

Web Map Service Application

Type	Application Component
Technology	GeoServer

Hosts spatial data layers

Website

Type	Application Component
Technology	Wordpress, Apache

Delivers content managed website and static content for single page application

Website content management

Type	Application Function

Technology	Wordpress

Relations

Composition relation

Type	Composition relation
Source	Seamap application
Target	Single-Page Application

Composition relation

Type	Composition relation
Source	Seamap application
Target	Web Application

Composition relation

Type	Composition relation
Source	Seamap application
Target	Web Map Service Application

Composition relation

Type	Composition relation
Source	Seamap application
Target	Database

Composition relation

Type	Composition relation
Source	Seamap application
Target	Batch processing

Realization relation

Type	Realization relation
Source	Website
Target	Website content management

Realization relation

Type	Realization relation
Source	Website
Target	Manage story map content

Realization relation

Type	Realization relation
Source	Website
Target	Storymap data API

Triggering relation

Type	Triggering relation

Source	Site Administrator
Target	Website content management

Triggering relation

Type	Triggering relation
Source	Site Administrator
Target	Manage story map content

Realization relation

Type	Realization relation
Source	Website
Target	Host dynamic webpages

Realization relation

Type	Realization relation
Source	Website
Target	Host static assets

Triggering relation

Type	Triggering relation
Source	Site Administrator
Target	Host static assets

Realization relation

Type	Realization relation
Source	Website
Target	Contact form

Realization relation

Type	Realization relation
Source	Website
Target	Usage analytics

Browse pages

Type	Triggering relation
Source	Marine park manager
Target	Host dynamic webpages

Browses web pages

Type	Triggering relation
Source	Marine park manager
Target	Website

Configure by updating records

Type	Triggering relation
Source	Site Administrator
Target	Database

Configure via Django admin

Type	Triggering relation
Source	Site Administrator
Target	Web Application

Delivers to customer browser

Type	Triggering relation
Source	Website
Target	Single-Page Application

Download static assets

Type	Triggering relation
Source	Marine park manager
Target	Host static assets

Explore spatial data

Type	Triggering relation
Source	Marine park manager
Target	Seamap application

GET layer thunbmails from

Type	Triggering relation
Source	Single-Page Application
Target	Web Application

GET statistic data from

Type	Triggering relation
Source	Single-Page Application
Target	Web Application

GET Story Map data

Type	Triggering relation
Source	Single-Page Application
Target	Storymap data API

GET storys from

Type	Triggering relation
Source	Single-Page Application
Target	Website

Makes API calls to

Type	Triggering relation
Source	Single-Page Application
Target	Web Application

Makes API calls to

Type	Triggering relation
Source	Single-Page Application
Target	Web Map Service Application

Makes API calls to

Type	Triggering relation
Source	Single-Page Application
Target	SQUIDLE+

Makes API calls to

Type	Triggering relation
Source	Seamap application
Target	SQUIDLE+

Makes WMS API calls to

Type	Triggering relation
Source	Seamap application
Target	3rd Party Web Map Services

Makes WMS API calls to

Type	Triggering relation
Source	Single-Page Application
Target	3rd Party Web Map Services

Makes WMS API calls to

Type	Triggering relation
Source	Batch processing
Target	3rd Party Web Map Services

Manage content and data

Type	Triggering relation
Source	Site Administrator
Target	Seamap application

Manges content

Type	Triggering relation
Source	Site Administrator

Target	Website

Reads from and writes to

Type	Triggering relation
Source	Web Map Service Application
Target	Database

Reads from and writes to

Type	Triggering relation
Source	Web Application
Target	Database

Reports usage to

Type	Triggering relation
Source	Usage analytics
Target	Web Analytics Service

Send usage data to

Type	Triggering relation
Source	Website
Target	Web Analytics Service

Send usage data to

Type	Triggering relation
Source	Single-Page Application
Target	Web Analytics Service

Send usage data to

Type	Triggering relation
Source	Seamap application
Target	Web Analytics Service

View spatial data

Type	Triggering relation
Source	Marine park manager
Target	Single-Page Application

Writes data to

Type	Triggering relation
Source	Batch processing
Target	Database