

Prepared by: Nick Holleman
Presented by: Jonathan Davids

Landfolio Framework

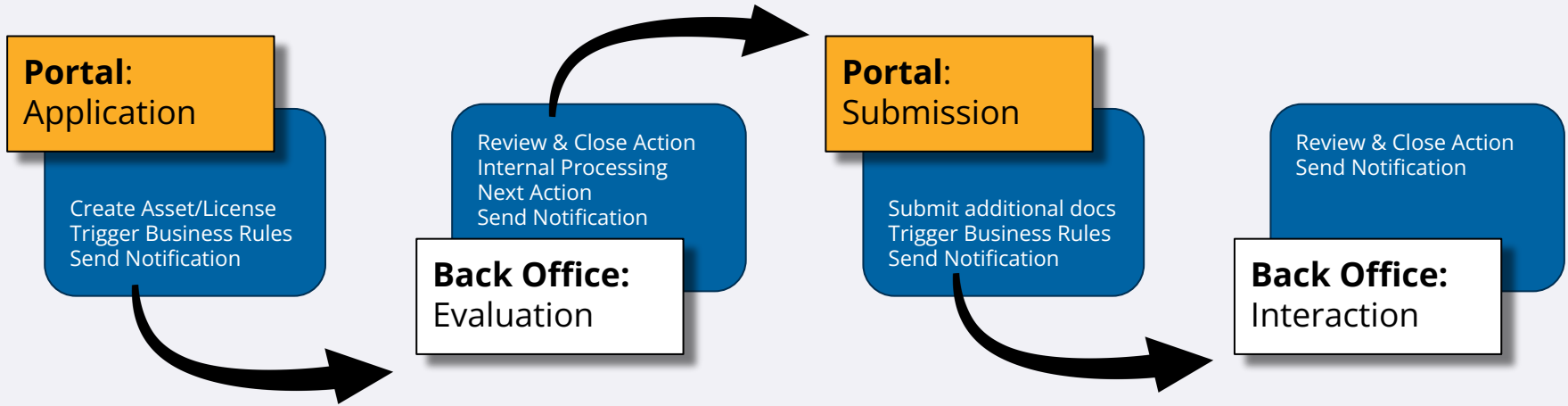
Our Next Generation Portal Technology

Landfolio LatAm Xperience - 4 May 2023

Background



Portal: Pattern of Interactions



Background

Landfolio e-Government Portal

- Introduced in 2013 as a public-facing extension to Landfolio Back Office
- Provides public / license-holders / investors with visibility and transactional capability
- Configurable off-the-shelf system with higher level of UI customisation than Back Office
- Implemented for >10 customers
 - Kenya
 - Tanzania
 - Uganda
 - Ethiopia
 - Zambia
 - South Africa (Petroleum Agency)
 - KP Province, Pakistan
 - Idaho State, United States
 - Papua New Guinea
 - The True Life Company
 - Lesotho



Background

- Modular design
- Pages can display
 - static content
 - maps
 - dynamic content
 - transactional capabilities
- Each page has a page type that determines what can be configured

The screenshot displays the Ministry of Mining Mining Cadastre Portal. At the top, there are logos for the Ministry of Mining and the Government of Kenya. The main content area is titled 'Licence Summary' and provides details for licence EPL/1023. A map on the right shows the location of the licence in North-Eastern Kenya.

Licence Summary	
Code	EPL/1023
Type	Exclusive Prospecting License
Status	Active
Owner	Test Company Ltd
Application Date	22/01/2015
Granting Date	07/04/2015
Expiry Date	06/04/2018
Commodities	COAL
Location	North-Eastern, Wajir
Official Area	17,111.7 km ²

Coordinates: [Coordinates](#)

The screenshot shows the Idaho Department of Lands website. The header includes the IDAHO logo and the Department of Lands. The user is logged in as Nick Holleran (Dimension Mining). The main content area is titled 'Company Lease Portfolio' and displays a table of leases. A map at the bottom shows the locations of the leases in Idaho.

Lease Code	Lease Type	Lease Status	Instrument Date	From	To	Location
E01236	Mineral Lease		07/01/1997	02/26/2017		Bose Meridian, 02N 02E, 1E; Idaho, Ada, Southwest
E02286	Mineral Lease		03/31/1977	02/26/2017		Bose Meridian, 55N 04W, 27; Idaho, Bonne, Priest Lake
E02464	Mineral Lease		08/01/1977	02/26/2017		Bose Meridian, 06S 41E, 1S, 5E; Idaho, Caribou, Eastern Idaho
E02831	Mineral Lease		01/01/1978	02/26/2017		Bose Meridian, 11N 38E; Idaho, Clark, Eastern Idaho
E02903	Mineral Lease		05/01/1978	02/26/2018		Bose Meridian, 05S 38E, 3E; 05S 39E, 3E; 06S 38E; Idaho, Caribou, East
E02956	Mineral Lease		05/01/1978	02/26/2018		Bose Meridian, 08S 42E, 3E; 08S 43E, 3E; 09S 42E, 09S 43E; Idaho, Car
E02957	Mineral Lease		05/01/1978	02/26/2018		Bose Meridian, 06S 41E, 1S, 1E, 2E, 22; Idaho, Caribou, Eastern Idaho

Locations of Leases



Background

- Menus - configurable to allow navigation between pages
- Memberships / roles control access
- Representation of companies and people
- Payment gateway integrations
- Branding to client needs - banner, logos, fonts, colours
- Built using WebForms technology

Application Details

Owner: Test Company Saved Today 5:35:36 PM
[Save New Prospect Application](#)


Type: *

Coordinates: [Change Coordinates](#) GCS ARC 1960 * [Export to CSV](#)

Commodities: Green Garnet
[Change Selected Commodities](#)
Commodies selected.

Supporting Documents: [Upload Documents](#) *
Required documents missing:
- Application Form
- Employment and Training Programme

Review Coordinates



Latitude	Longitude
1. 03° 09' 15.1" S	32° 50' 41.22" E
2. 03° 09' 20.37" S	32° 50' 51.36" E
3. 03° 09' 20.21" S	32° 50' 48.92" E
4. 03° 09' 21.98" S	32° 50' 44.61" E
5. 03° 09' 19.64" S	32° 50' 40.47" E
6. 03° 09' 18.7" S	32° 50' 26.43" E
7. 03° 09' 14.06" S	32° 50' 28.42" E

Area: 0.09 km² ▼

Location: Mwanza, Misungwi

Office: HQ-Dar es Salaam



Why Framework?



More Modern Look & Feel

Improved UI layout & styling options

VICTORIA State Government

DASHBOARD PROFILE COMMITTEE TASKS RESERVES TENURE INFO CENTRE

NICK HOLLEMAN

DASHBOARD > RESERVE LIST > RESERVE DETAILS: 2004289 TOONGABBIE CRICKET/PUBLIC REC RESERVE

2004289 TOONGABBIE CRICKET/PUBLIC REC RESERVE

RESERVE TASKS

Reserve Details Activity Regulations Assets Related Tenure Documents Discussion

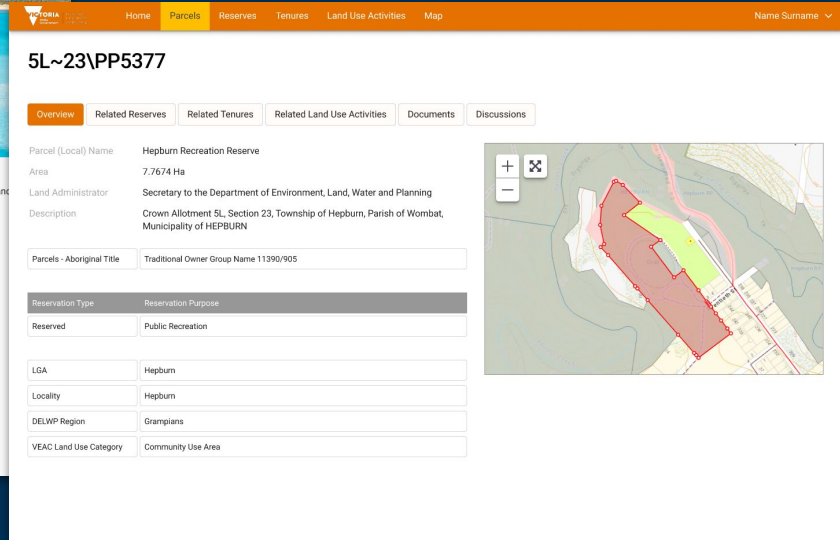
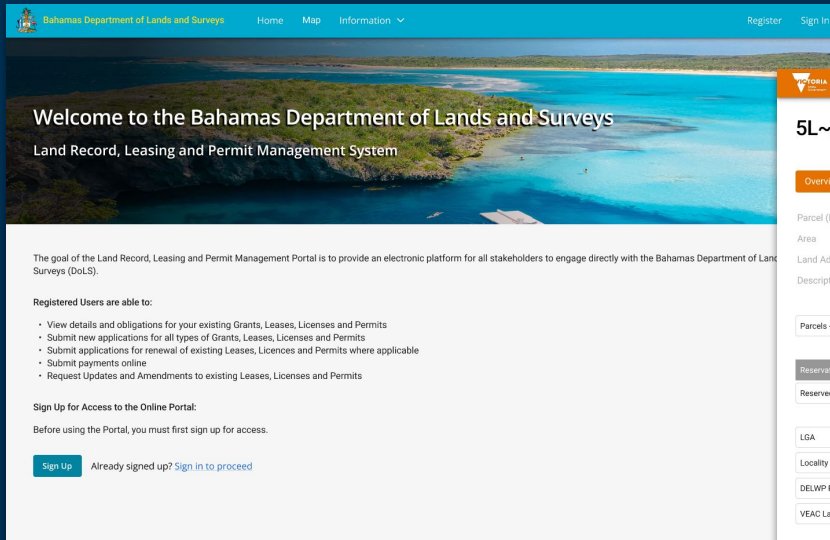
Name	TOONGABBIE CRICKET/PUBLIC REC RESERVE
Category	Reserves - Community Use Reserve
Subcategory	Recreation Area
DEWLP Region	Gippsland
Area	0.9105 Ha
Certified 17(01)	No
Legislation	Crown Land (Reserves) Act 1978, Section 4
Address	

Map showing the location of the reserve in Toongabbie, Victoria. The reserve is highlighted in red and includes an oval. The map shows surrounding streets: King St, Scott St, and Cowen St. Landmarks include Toongabbie Mechanics Institute and St David's Anglican Church. A scale bar indicates 0, 30, and 60 meters. A 'Show Coordinates' button is visible at the bottom right of the map.



Styling

- Banners, logos, fonts and colours (Primary & Secondary) configurable via CSS



The Red Sea Authority

Home Information

EN | العربية | Register Sign In

Welcome to the Red Sea Zone Authority Land Registry System

Find and access information relating to land etc.

Managing Land Assets and Transactions?

Are you a land owner wanting to achieve something on your land? Do you work for a conveyancing law firm and need to manage aspects of land assets under your purview?

Register now to access and manage certain aspects of land assets!

[Register Now](#) Already signed up? [Sign in to proceed](#)

Watch this introductory video to our Registry System



Botswana Mining Cadastre Home Map Information

Register Sign In

Welcome to the Botswana Mining Cadastre Portal

Your gateway to all mineral tenure and explosives services in Botswana

The goal of the Mining Cadastre Portal is to provide an electronic platform for all stakeholders in the mining sector to engage directly with the Botswana Ministry of Mineral Resources, Green Technology and Energy Security (MMGE).

Registered Portal Users are able to:

- View details and obligations for your existing Mineral Tenure and Explosives Licenses
- Submit applications for new licenses, certificates and permits
- Submit applications for the renewal of existing licenses, certificates and permits
- Submit reports, work programs and payments
- Apply for Ownership Transfer, Relinquishment (Area), Extension (Area), Surrender and Work Program Modification
- Request Inspection Services

The Red Sea Authority

Home My Portfolio Apply Information

EN | العربية | John Doe

My Real Estate

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

[View Now](#)

My Leases

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

[View Now](#)

My Transactions

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

[View Now](#) [New Transaction](#)

Botswana Mining Cadastre Dashboard Licenses Obligations Map Information

John Doe

Welcome User!

[Apply For License](#)

Please see below a list of your licenses which can also be filtered by Status. The licenses are also highlighted on the map below. Click on the Code link to see the details of that license.

My Licenses

All Licenses **Active Licenses** Applications Inactive Licenses

Code	Name	License Type	Expiry Date	License Area
2432893	Big Mining Company	Exploration License	27 January 2033	23,367 km2
2838221	Spatial Mining Company	Exploration License	13 February 2042	8,768 km2
2434983	Mineral Mining Company	Building License	15 December 2030	2,345 km2
3204211	Big Mining Company	Mining License	23 January 2027	14,990 km2
3204343	Gold Miners Plc	Mining License	23 January 2031	13,452 km2

Recent Activity

Browse Transactions

[Browse All](#)

Editable Transactions

Code	Type	Status
2432893	Transfer	Pending
2838221	Transfer	Pending
2434983	Mutation	Pending

Transactions in Progress

Code	Type	Status	Registration Date
2432893	Transfer	In Progress	14/03/2022
2838221	Transfer	In Progress	12/12/2025

Current Obligations

[Browse All](#)

Payment Obligations

Summary	Due Date
Payment: Renewal Fee (USD 4500.00)	08/03/2022
Payment: Submission Fee (USD 1250.00)	18/03/2022

Reporting Obligations

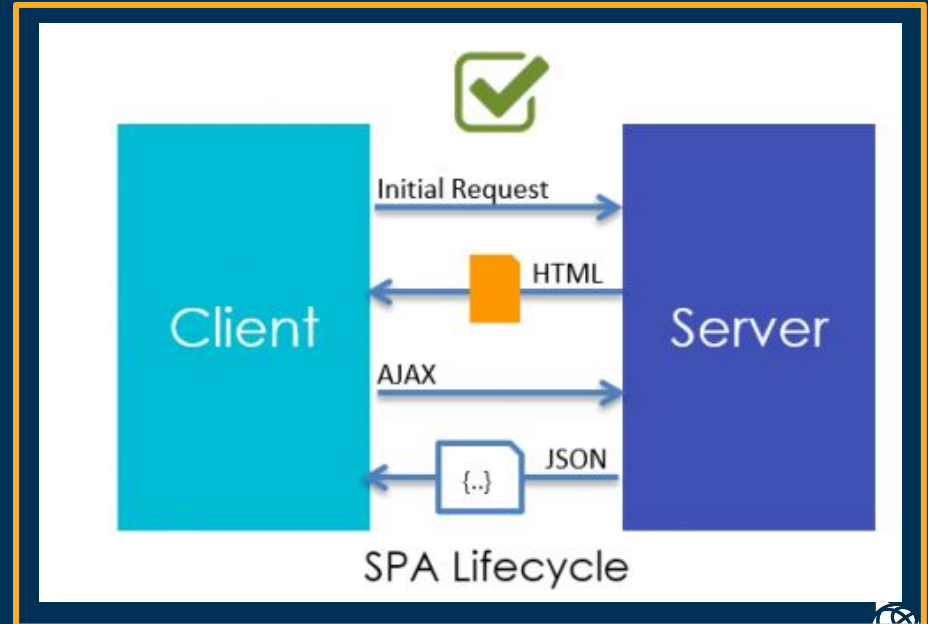
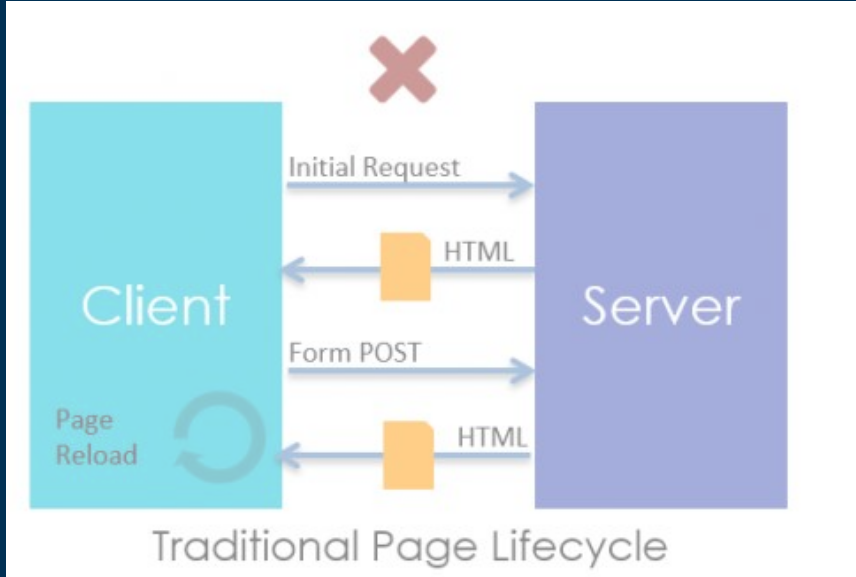
Summary	Due Date
Resubmit Reporting Documents	12/03/2022
Submit Required Documents	13/03/2022
Resubmit Lease Documents	16/03/2022





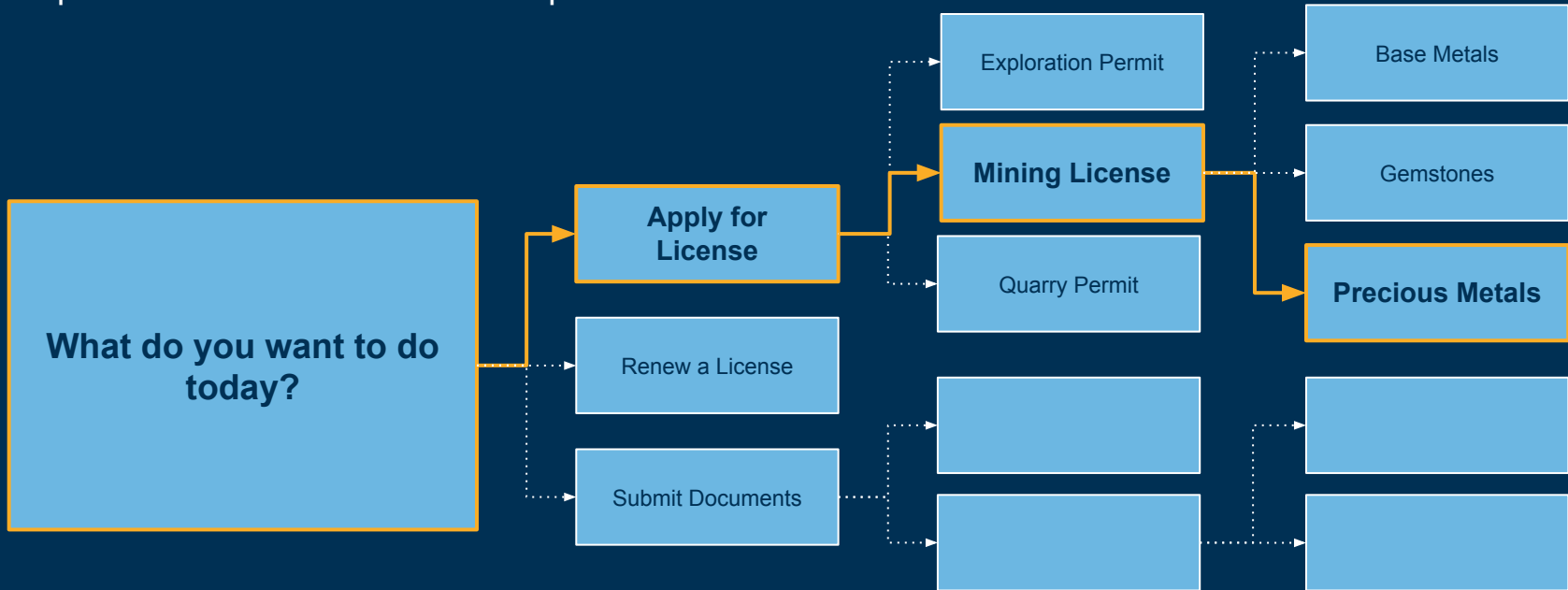
Single Page Application

dynamically updates the current web page instead of loading entire new pages



Increased Control of Site Configuration

Create sites that guide users to success, allowing creation of fully-featured portals with transactional capabilities



Responsive

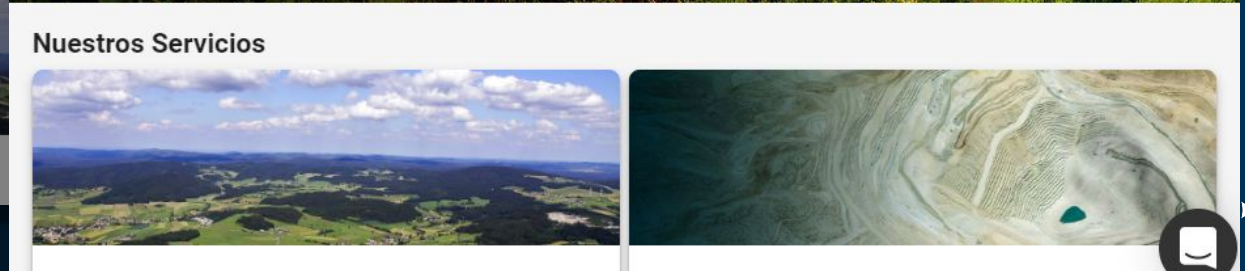
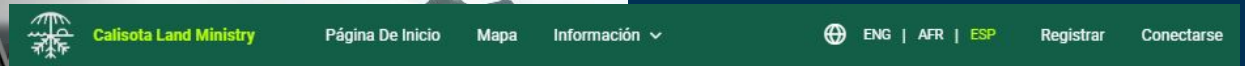
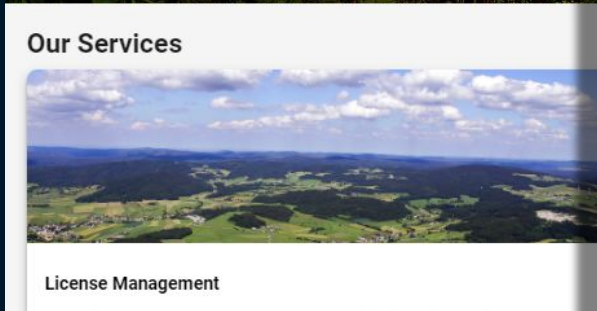
Modify the content of the page based on the size & type of device being used



Fully Multilingual

Every text element on the site can be configured in each language

Left-to-right and right-to-left languages supported



PLUS...

All those good things from the previous eGov Portal

ENABLING...

- Fully transactional capabilities for applications and portfolio management
- Spatial data display and capture (including first-come-first-serve spatial validation checks)
- Online payments
- Transparent public data sharing of cadastral information
- Open public participation

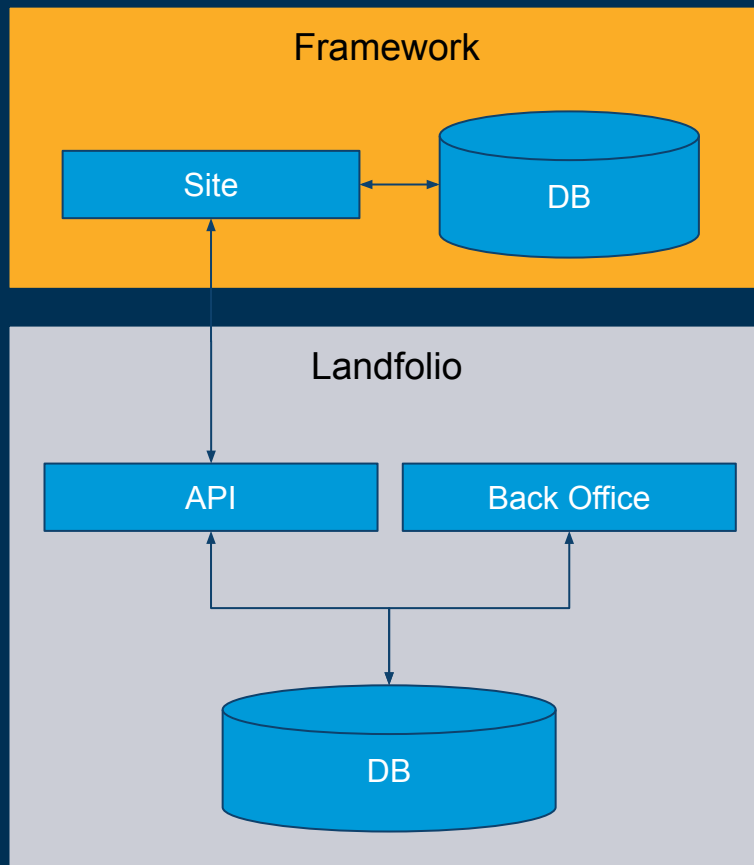


Anatomy of a Framework site



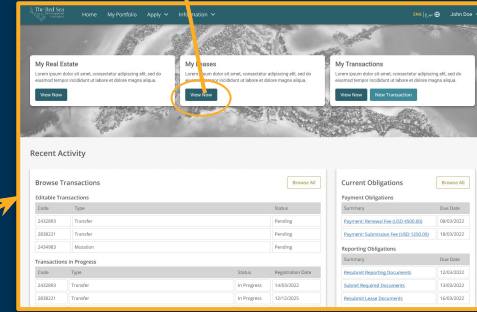
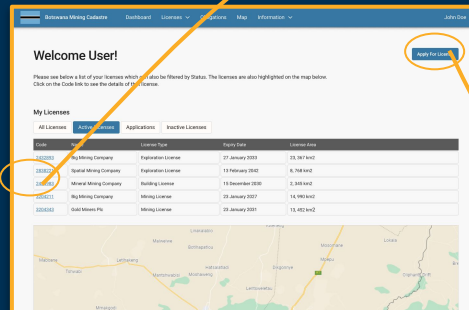
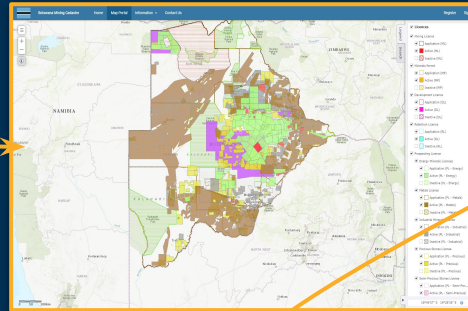
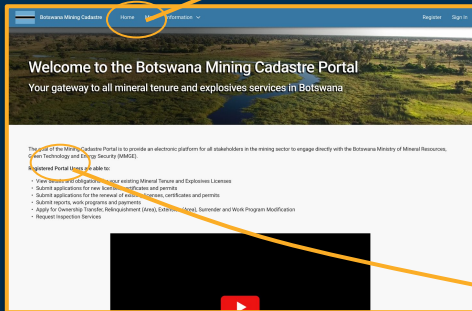
High level system architecture

- New UI on existing business logic
- Dependent on Landfolio data model and business processes



No 'Out the Box' UI

- Add Pages & Contents
- Add Navigation & Behaviour



Page Content

- Sections & Containers
 - Layout - position and arrangement
- Widgets
 - UI elements - content, data, functionality
 - Can be triggers to behaviours



Sections & Containers

Botswana Mining Cadastre | Dashboard | Licences | Obligations | Map Portal | Information | Eduan Naude

Welcome User!

[Apply for Licence](#)

Please see below a list of your licences which can also be filtered by Status. The licences are also highlighted on the map below. Click on the Code link to see the details of that licence.

For general enquiries or to request company representation, please click [here](#).

My Licences

[All Licences](#) | [Active Licences](#) | [Applications](#) | [Inactive Licences](#)

Mineral Concessions

Code	Licence Type	Status	Application Date	Commencement Date	Expiry Date
123test	Mining Licence	Renewal Pending - Document Verification	31/05/2022	31/05/2022	30/05/2047
ac test	Mining Licence	Application Pending - Document Verification	07/02/2022		
DL000142-APP	Development Licence	Application Pending - Document Verification	18/07/2022		
DL00014322-APP	Development Licence	Application Pending - Document Verification	18/07/2022		
DL000144/2022-APP	Development Licence	Application Pending - MME Consideration	18/07/2022		

<< < 1 2 3 4 5 > >>

Miscellaneous Licences and Permits

Code	Licence Type	Status	Application Date	Commencement Date	Expiry Date
No items available.					

<< < 1 2 3 4 5 > >>



Widgets

Welcome User!

Please see below a list of your licences which can also be filtered by Status. The licences are also highlighted on the map below. Click on the Code link to see the details of that licence.

Apply for Licence

For general enquiries or to request company representation, please click [here](#).

My Licences

- All Licences
- Active Licences
- Applications
- Inactive Licences

Mineral Concessions

Code	Licence Type	Status	Application Date	Commencement Date	Expiry Date
123test	Mining Licence	Renewal Pending - Document Verification	31/05/2022	31/05/2022	30/05/2047
ac test	Mining Licence	Application Pending - Document Verification	07/02/2022		
DL000142-APP	Development Licence	Application Pending - Document Verification	18/07/2022		
DL00014322-APP	Development Licence	Application Pending - Document Verification	18/07/2022		
DL000144/2022-APP	Development Licence	Application Pending - MME Consideration	18/07/2022		

<< < 1 2 3 4 5 > >>

Miscellaneous Licences and Permits

Code	Licence Type	Status	Application Date	Commencement Date	Expiry Date
No items available.					



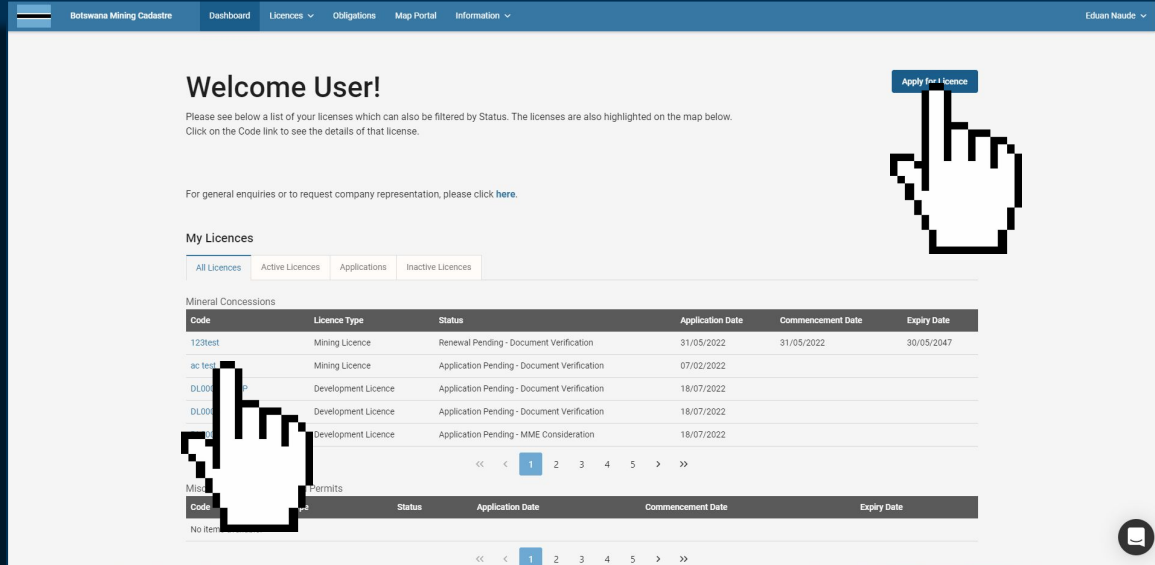
Behaviour

User Interactions

- Task Widget > Click
- List Widget > Link Click
- Page > Load
- Draft > Create

Respond with Behaviour

- Navigate to Page
- Submit Draft
- Generate Report



The screenshot displays the Botswana Mining Cadastre dashboard. The top navigation bar includes the Botswana flag, the text 'Botswana Mining Cadastre', and menu items for 'Dashboard', 'Licences', 'Obligations', 'Map Portal', and 'Information'. The user's name 'Eduan Naudé' is visible in the top right corner.

The main content area features a 'Welcome User!' message, a list of licenses, and a 'My Licences' section. A hand cursor is positioned over the 'Apply for Licence' button in the top right. Another hand cursor is positioned over the first row of the 'Mineral Concessions' table.

My Licences

Buttons: All Licences, Active Licences, Applications, Inactive Licences

Mineral Concessions

Code	Licence Type	Status	Application Date	Commencement Date	Expiry Date
123test	Mining Licence	Renewal Pending - Document Verification	31/05/2022	31/05/2022	30/05/2047
ac test	Mining Licence	Application Pending - Document Verification	07/02/2022		
DL0001	Development Licence	Application Pending - Document Verification	18/07/2022		
DL0002	Development Licence	Application Pending - Document Verification	18/07/2022		
DL0003	Development Licence	Application Pending - MME Consideration	18/07/2022		

Navigation: << < 1 2 3 4 5 > >>

Mineral Permits

Code	Status	Application Date	Commencement Date	Expiry Date
No Item				

Navigation: << < 1 2 3 4 5 > >>



Status Update



Where we are now

Go-live completed for Botswana Mining Cadastre Portal in **Oct/Nov 2022**

- Fully transactional site compliant with local legislation
- Full service licensing
- Payment integration



Upcoming implementations

We continue to build out functionality to support a number of implementations that we expect to go live over the next six to nine months with portals built using Landfolio Framework:

- Natural Resource Permitting and Licensing Portal, Government of the **NorthWest Territories**, Canada
- **Victoria** State Land Use Activity Portal, Australia
- **Red Sea** Zone Authority Land Registry System, Saudi Arabia
- **Bermuda** Land Title Registry Office
- **Sint Maarten** Kadaster
- **Barbados** Land Registry
- **Bahamas** Land Record, Leasing and Permit Management System
- **Namibia** Mining Cadastre Portal



Where to next?



Where to next?

- Framework is **not a product but a toolkit** for making Landfolio-compatible web applications
- Portals are our first application, but we foresee many others in the near future including
 - Dashboards (making use of Power BI widget, etc)
 - Focused use case interfaces to the Landfolio core system as complementary tools
 - Eventually, a Back Office replacement



Recently added functionality



Discussions

- Supporting interactive discussions between portal users and back office staff on licenses and actions

General Enquiries

To submit a general enquiry, click the **New Enquiry** button. This will open a new discussion with the Department of Mines. Each new enquiry must have a suitable name and description, and attach any supporting documents if necessary.

To follow up on an existing enquiry, select the corresponding entry under My Requests and click the **Add Comment** button to submit your enquiry.

My Requests

New Enquiry

Account Activation 09/02/2023
Hi there,Can you please send us supporting documentation? ...

Account Activation

Opened 09/02/2023

Participants DOM Portal Administrators (Representation and Enquiries), Trimble - Eduan Naude

Normal Sans Serif B I U A

Please see the attached documents to activate my account.

Thank you!

Add attachment **Add Comment**

Account Details.pdf

landfollo ADMIN 09/02/2023

Hi there,
Can you please send us supporting documentation?

Regards,
Admin Support

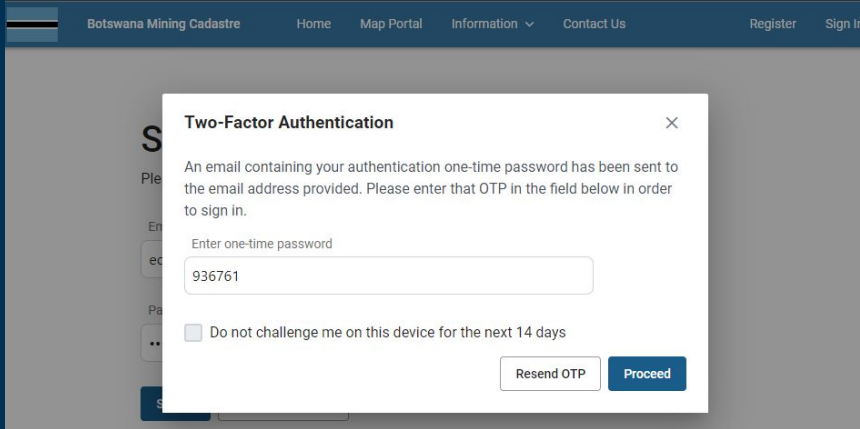
Trimble - Eduan Naude 09/02/2023

Hi, Please activate my account to access my licenses.

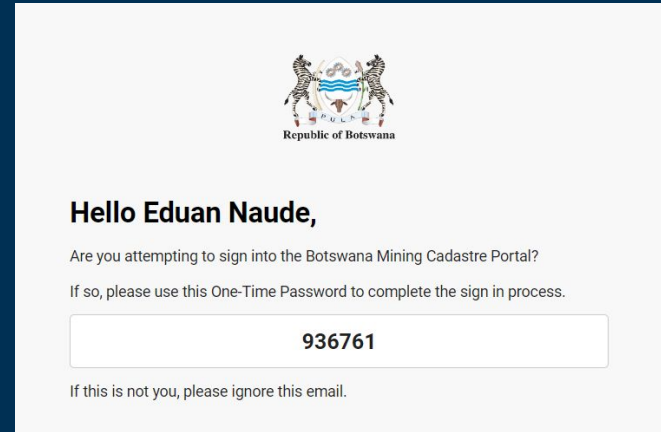


Multi-factor authentication

- Built-in
- SAML integration (bring your own)



The screenshot shows the Botswana Mining Cadastre portal with a dark blue header containing navigation links: Botswana Mining Cadastre, Home, Map Portal, Information, Contact Us, Register, and Sign In. A white modal window titled "Two-Factor Authentication" is displayed in the foreground. The modal contains the following text: "An email containing your authentication one-time password has been sent to the email address provided. Please enter that OTP in the field below in order to sign in." Below this is a text input field labeled "Enter one-time password" containing the value "936761". At the bottom of the modal, there is a checkbox labeled "Do not challenge me on this device for the next 14 days" which is currently unchecked, and two buttons: "Resend OTP" and "Proceed".



The screenshot shows an email notification on a white background. At the top center is the coat of arms of the Republic of Botswana, with the text "Republic of Botswana" underneath. Below the logo, the text reads: "Hello Eduan Naude," followed by "Are you attempting to sign into the Botswana Mining Cadastre Portal?" and "If so, please use this One-Time Password to complete the sign in process." A large white box with a thin border contains the one-time password "936761". At the bottom, it says "If this is not you, please ignore this email."



Payment gateway integration with DirectPay / PayGate

Submit Payment

[Download Invoice](#) [Discard](#)

Licence Code	TEST-PL0001/2022-NIGIS	Due Date	25/11/2022
Payment Reference	AF/PL/00000004	Amount Due	BWP 100

Select method of payment:

Proof of Payment

- Select the "Upload" button below to attach your proof of payment
- Select the "Add" button to upload additional documents.
- Once you have attached your proof of payment(s), select "Submit Proof of Payment".

Proof of Payment

Debit/Credit Card

- Select "Pay Now" to make an instant payment.
- You will be redirected to the Payment Gateway where you will enter your card details and submit the payment.
- After making your payment, you will be redirected back to the Botswana Mining Cadastre Portal to download your payment receipt.

I have read and accept the terms of use of this site.

PAYGATE

English

Payment Summary

Merchant	Department of Mines
Service Date	Thu Feb 09 2023
Payment Reference	AF/PL/00000004-168
Total	BWP 100.00

[Back To Department of Mines](#)

Payment Method & Details

Select payment method:

Card Holder Name

Card Number Expiry Date CW

By continuing I accept all relevant Ts&Cs, including the Privacy Policy, and I hereby give permission for DPO Group, and its Affiliates, to use personal information provided for the sole purpose of processing the requested transaction and conducting the necessary fraud and risk-screening.

Verified by **VISA** **MasterCard SecureCode** **pri BSS** **VISA** **MasterCard**

DPO GROUP Think Payments Website | Terms & Conditions | Contact Us



PowerBI widget

Embedded PowerBI reports in Framework site

User Profile:

Details Representation **PowerBI** Documents

Barbados Land Registry
Online Submissions Portal

Control Number Search X

Parcel Number Search X

Land Tax Number Search X

Instrument Number Search X

Party Name Search X

Property Address Search X

Instrument Type

Date Filed
Between

Control Number	Instrument Number	Instrument Type	Date Filed	Parcel Number	Land Tax Number
MAG 029		Registered Parcel			
SBC 275		Registered Parcel			
SBC 490		Registered Parcel			
1		Registered Parcel			
109		Registered Parcel			
131		Registered Parcel			
150		Registered Parcel			
196903280100	RD1969001433	Conveyance/Transfer – Land Alone (RD-1b)	1969-03-06		
197001020001	RD1970000001	Memorandum of Deposit (RD-22)	1970-01-02		
197001020002	RD1970000002	Power of Attorney; Under Hand (RD-8)	1970-01-02		
197001020003	RD1970000003	Release of Legal Mortgage/Release of Lien (RD-5a)	1970-01-02		
197001020004	RD1970000004	Release of Legal Mortgage/Release of Lien (RD-5a)	1970-01-02		
197001020005	RD1970000005	Release of Legal Mortgage/Release of Lien (RD-5a)	1970-01-02		
197001020006	RD1970000006	Conveyance/Transfer – Land Alone (RD-1b)	1970-01-02		
197001020007	RD1970000007	Conveyance/Transfer – Land Alone (RD-1b)	1970-01-02		



Asset List enhancements

Filtering and sorting

In-list tasks

List Filtering

Code	License Type	Expiry Date	License Area	Active
2432893	Mining License		23,367 km2	Yes
2838221	Exploration Lic		0.537 km2	Yes
2434983	Mining License		2,345 km2	Yes
3204343	Mining License	23 January 2031	13,452 km2	No
2838221	Exploration License	13 February 2042	0.537 km2	Yes
3204211	Exploration License	23 January 2027	0.456 km2	No

Navigation: 1 2 3 4 5 10



Data Display

Additional data display via...

Map Reference list widget

Party List widget

Reference Codes widget

VICTORIA
Department of Environment, Land, Water and Planning

Home Parcels Reserves Tenures Land Use Activities Map

5L~23\PP5377

Overview Related Reserves Related Tenures Related Land Use Activities Related Documents Discussions

Parcel (Local) Name	Hepburn Recreation Reserve
Area	7.7674 Ha
Land Administrator	Secretary to the Department of Environment, Land, Water and Planning
Crown Description	Crown Allotment 5L, Section 23, Township of Hepburn, Parish of Wombat, Municipality of HEPBURN
Aboriginal Title	Traditional Owner Group Name 11390/905
Reservation Type	Reserved
Reservation Purpose	Public Recreation
LGA	Hepburn
Locality	Hepburn
DELWP Region	Grampians
VEAC Land Use Category	Community Use Area





Thank You

Credits

Product Team:
Toby Mills
Eduan Naude

UI/UX:
Alex Aiff

Software Engineers:
Craig Bantam
Clinton Schwartz
James Taruvinga
Geoffrey Fook
Adnan Sultan
Jarryd Deane
Stephen Finnis

QA:
Tatenda Nyakubaya
Sibabalwe Madikizela
Ryan Johnson

