



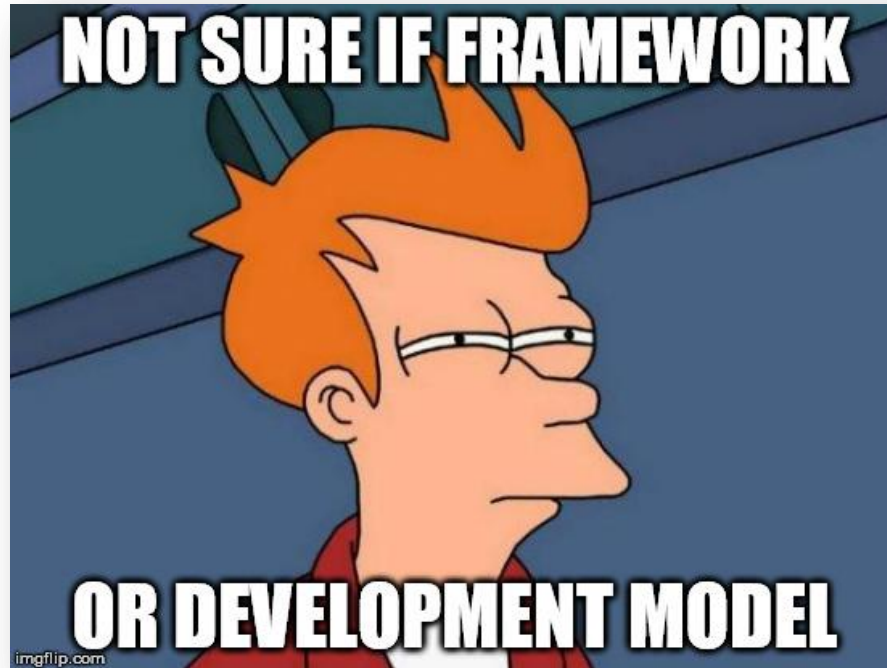
BeeCon 2016

# 2 years of Aikau

**How is it faring and what do we want from it?**

**Axel Faust, Senior IT-Consultant / Software Architect**

What is Aikau?



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## What is Aikau?

- „Just“ a library
  - Widgets / services
  - Tests suite during build
- Dev / customization model
  - Modular components
  - Publication / subscription
  - Declarative page model
  - Post-processing
  - Dependency collection / aggregation

Frameworks behind the „framework“



(to a limited extent)



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# What is Aikau?

## (Very simple) Examples

```
var services, widgets;

widgets = [{
  name : 'alfresco/lists/AlfList',
  config : {
    loadDataPublishTopic : 'LOAD_SIMPLE_LIST',
    widgets : [{
      name : 'alfresco/lists/views/AlfListView',
      config : {
        widgets : [{
          name : 'alfresco/lists/views/layouts/Row',
          config : {
            widgets : [{
              name : 'alfresco/lists/views/layouts/Cell',
              config : {
                widgets : [{
                  name : 'alfresco/renderers/Property',
                  config : {
                    propertyToRender : 'id'
                  }
                ]
              }
            ]
          }
        ]
      }
    ]
  }
}];

services = ['test/SimpleListService'];

model.jsonModel = {
  rootNodeId : 'simpleList',
  services : services,
  widgets : widgets
};
```

## Modular services / widgets

```
define(["dojo/_base/declare", "dijit/_WidgetBase", "dijit/_TemplatedMixin", "dojo/text!./templates/Label.html",
        "alfresco/core/Core", "dojo/_base/lang", "dojo/dom-construct"],
        function(declare, _WidgetBase, _TemplatedMixin, template, AlfCore, lang, domConstruct) {
    return declare([_WidgetBase, _TemplatedMixin, AlfCore], {

        i18nRequirements: [{i18nFile: "./i18n/Label.properties"}],
        cssRequirements: [{cssFile: "./css/Label.css"}],
        templateString: template,

        label: "",
        subscriptionTopic: null,
        subscriptionPayloadProperty: "label",

        postMixInProperties: function alfresco_html_Label_postMixInProperties() {
            this.label = this.message(this.label);
            if (this.subscriptionTopic && lang.trim(this.subscriptionTopic) !== "")
            {
                this.alfSubscribe(this.subscriptionTopic, lang.hitch(this, this.onLabelUpdate));
            }
        },

        onLabelUpdate: function alfresco_html_Label_onLabelUpdate(payload) {
            var update = lang.getObject(this.subscriptionPayloadProperty, false, payload);
            if (update !== null && typeof update !== "undefined")
            {
                domConstruct.empty(this.labelNode);
                var textNode = document.createTextNode(update);
                this.labelNode.appendChild(textNode);
            }
        }
    });
});
```





## Aikau milestones

- Feb 2013: first public SVN code
- Aug 2013: header model 4.2.d
- Jan 2014: „Introducing Aikau“
- May 2014: faceted search
- Jan/Feb 2015: GitHub / separation from Share
- Mar 2015: Alfresco 5.0.d + updateable Aikau
- April 2016: > 60 weekly releases





2 years of Aikau

Use cases from trivial to complex

# Simple customizations

## Example: Faceted search result

Search in: All Sites ▾

Q .pdf Search

Filter by:

▼ Creator

Alice Beecher 1

▼ File Type

Adobe PDF Document 1

▼ Size

100KB to 1MB 1

1 - results found



**Project Contract.pdf** (Project Contract for Green Energy) ⓘ  
Modified over 4 years ago by Administrator  
Contract for the Green Energy project  
Site: Sample: Web Site Design Project  
In folder: Agency Files/Contracts  
Size: 373 KB

Search in: All Sites ▾

Q .pdf Search

Filter by:

▼ Creator

Administrator 2

Alice Beecher 1

▼ File Type

Microsoft Word 1

Adobe PDF Document 2

3 - results found



**Project Contract.pdf** (Project Contract for Green Energy) ⓘ

Modified over 4 years ago by Administrator

Contract for the Green Energy project

Site: Sample: Web Site Design Project

In folder: Agency Files/Contracts

Size: 373 KB

Created on: Tue 15 Feb 2011 22:26:54

Source: <http://www.contezza.nl/blog/customizing-the-search-results-widget-alfresco-50d>

Credits: Sureka Govindaraj Gnanasekaran, Contezza



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## Simple customizations

- Pretty straightforward
  - Extension module + custom JS
  - widgetUtils for traversal / manipulation
  - IDs from base JS file
- See Aikau jsdoc for widgets / params  
<http://dev.alfresco.com/resource/docs/aikau-jsdoc>
  - Follow extends/mixes for inherited params

```
var headerMenuBar, widgets = model.jsonModel.widgets;

widgetUtils.deleteObjectFromArray(widgets, 'id', 'HEADER_MY_FILES');
widgetUtils.deleteObjectFromArray(widgets, 'id', 'HEADER_SHARED_FILES');
widgetUtils.deleteObjectFromArray(widgets, 'id', 'HEADER_SITES_MENU');
widgetUtils.deleteObjectFromArray(widgets, 'id', 'HEADER_TASKS');
widgetUtils.deleteObjectFromArray(widgets, 'id', 'HEADER_PEOPLE');
widgetUtils.deleteObjectFromArray(widgets, 'id', 'HEADER_REPOSITORY');

headerMenuBar = widgetUtils.findObject(widgets, 'id', 'HEADER_APP_MENU_BAR');

headerMenuBar.config.widgets.splice(1, 0, {
  id : 'HEADER_POC_ORG_CONFIG',
  name : 'alfresco/menus/AlfMenuBarItem',
  config : {
    label : 'page.poc-supplier-meta.title',
    targetUrl : '<url>'
  }
});

var searchHeader = widgetUtils.
  findObject(model.jsonModel.widgets, 'id', 'HEADER_SEARCH');
searchHeader.name = 'prodyna-search/header/SearchBox';
searchHeader.config.popupMenuWidgets =
  searchHeader.config.popupMenuWidgets || [];
if (page.url.templateArgs.site)
{
  searchHeader.config.popupMenuWidgets.splice(0, 0,
  {
    name : 'prodyna-search/header/SearchInputAwareMenuItem',
    config :
    {
      label : '<label>',
      targetUrl : '<url>',
      inputAwareTargetUrl : '<url>'
    }
  });
}
```







# Simple customizations

## Limitations / issues

- Customizability of (new) pages
  - E.g. no widget IDs in faceted search until 5.0.2
  - Changes to key widgets + services
- Customizability of complex / composite widgets
  - Partial / no JSON sub-model
- JSDoc = terse + developer-focussed + unversioned

```
documentAndFolderActions :string[]
```

This can be configured to override the default filter for the actions that are applicable to folder and document nodes. Actions need to be filtered as Aikau does not currently support all of the actions that can be configured in Alfresco Share. However, if custom actions are provided by an extension or further filtering is required then they can be configured using this attribute.

Type:

- string[]

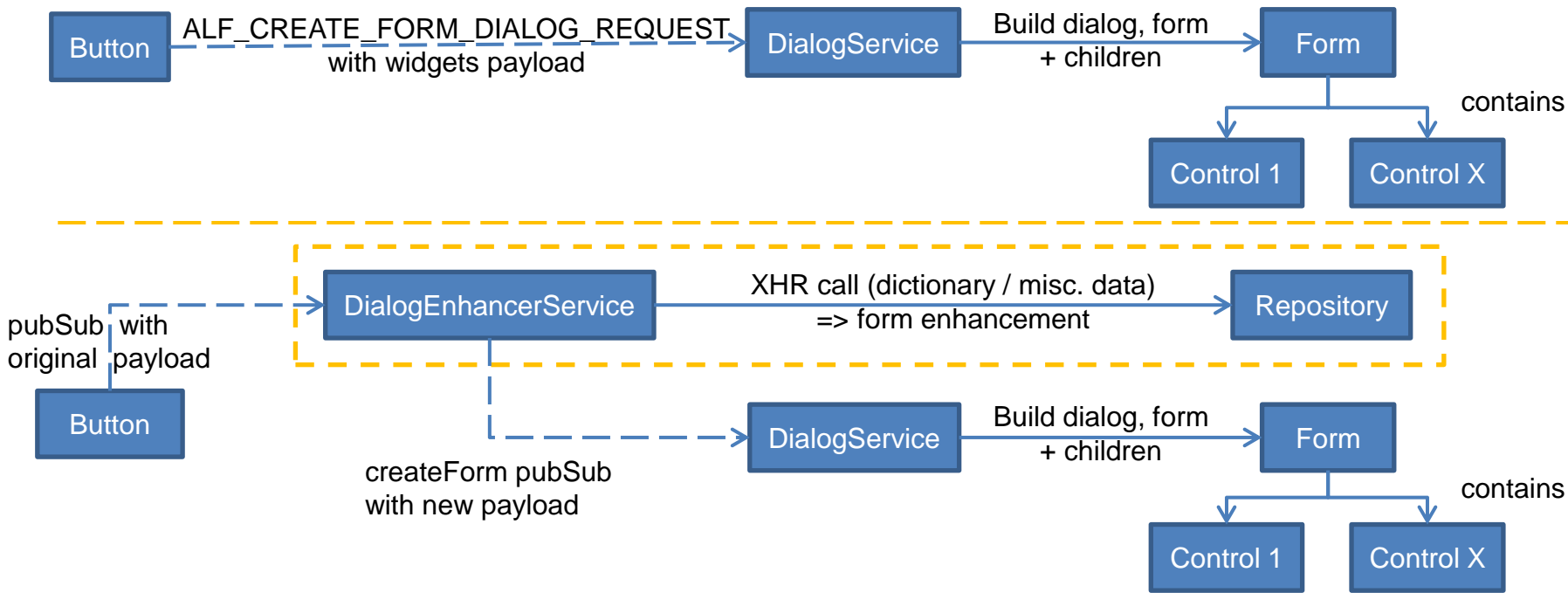
Default Value: null

Source: [search/AlfSearchResult.js, line 124](#)



# Custom features / enhancements

Example: Form enrichment





## Custom features / enhancements

- Dozens of „starter“ modules / mixins
  - WidgetBase + Templated
  - AbstractService (1.0.32+)
  - Core + CoreXhr
- Cornerstone: pubSub
  - Widget ⇔ service
  - „Request“ + „Response“
- Complex user interactions
  - Small services w/ distinct responsibility
  - pubSub chaining / orchestration

```
define([ 'dojo/_base/declare', 'alfresco/services/BaseService', 'dojo/_base/lang' ],
    function(declare, BaseService, lang)
    {
        return declare([ BaseService ], {

            generatedRowCount : 25,

            registerSubscriptions : function test_SimpleListService_registerSubscriptions()
            {
                this.alfSubscribe('LOAD_SIMPLE_LIST', lang.hitch(this, this.onLoadSimpleList));
            },

            onLoadSimpleList : function test_SimpleListService_onLoadSimpleList(payload)
            {
                var idx, dataEntries = [];

                for (idx = 0; idx < this.generatedRowCount; idx++)
                {
                    dataEntries.push({
                        id : idx
                    });
                }

                this.alfPublish((payload.alfResponseTopic || 'LOAD_SIMPLE_LIST') + '_SUCCESS', {
                    items : dataEntries,
                    metadata : {}
                }, false, false, payload.alfResponseScope || '');
            }
        });
    });
```





## Custom features / enhancements

### Limitations / issues

- Learning curve for „citizen developers“
  - AMD, pubSub, „how module X works“
  - Tutorials partially outdated

*„I hate subscription model already“*

*„looks like I start loving YUI2“*

- Limited ability to redirect / intercept standard pubSub
  - (Virtually) hard-coded topics / constants
  - Service sub-classing problematic
- Few defined extension points (1.0.60 => 18)
  - Only config params guaranteed



# Custom pages / apps

## Example: Complex page prototype

Navigation into different sub-apps  
(i.e. master data management, dynamically loaded menu contents)

Home Ausschreibungen Einkaufspreismanagement Profil-/Stammdaten Aufgaben Axel Faust

ABCDEFGHIJKLMNOPQRSTUVWXYZ

Allgemein Zeitrahmen Lose Lieferanten Rollen Dokumente Nachrichten Notizen

Schlüssel: A2016-0001 Modul: Nahrungsmittel  
Name: Test Typ: Ausschreibung  
Version: 0001 Mit Zielpreisvorgabe: Nein  
Status: Vorbereitung Phase 1 Mit Auf-/Abschläge: Nein  
Statusvermerk: NAZ erforderlich: Nein

Neu laden Bearbeiten

Hinzufügen Massenänderung 1-15 von 60 < Zurück 1 Weiter > 15 pro Seite Ansicht Ausgewählte Elemente...

Fehlende Daten: 23

Los	Art-nr.	Art-name	WG	WG St. 1	WG St. 2	Kategorie	Geb.-einheit	Geb.-inh.	Inh.-einheit	Erw. Preisgütt	CPV	EK-Vol.	Einheit Neu	Alt. erf.	Anbr. erw.	Zielpreis	Währung
2	10049	MIXED PICKLES 0.37...	34	105	205	Grundsoriment	GL	1	GL	14 Tage		1	GL	Ja	Nein	Nein	EUR
2	10050	BOHNEN SALAT 2.6...	34	105	205	Grundsoriment	KTN	2	GL	14 Tage		1	KTN	Ja	Nein	Nein	EUR
1	10051	SCHNITTKÄSE PFEF...	12	103	203	Grundsoriment	PCK	0,5	KG	14 Tage		1	PCK	Ja	Nein	Nein	EUR
1	10052	SCHNITTKÄSE TOM...	12	103	203	Grundsoriment	PCK	0,5	KG	14 Tage		1	PCK	Ja	Nein	Nein	EUR
1	10053	HERREN KUCHEN	47	108	207	Grundsoriment	KTN	3,2	KG	14 Tage		1	KTN	Ja	Nein	Nein	EUR
1	10054	BAGUETTE GASTR...	21	104	204	Grundsoriment	KTN	5,28	KG	14 Tage		1	KTN	Ja	Nein	Nein	EUR
2	10055	PETERSILIE GLATT	8	102	202	Grundsoriment		1		14 Tage		1	Ja	Nein	Nein	EUR	
2	10055	PETERSILIE GLATT	8	102	202	Grundsoriment	ST	0,2	KG	14 Tage		1	ST	Ja	Nein	Nein	EUR
1	10064	MANDARIN ORANG...	38	105	205	Grundsoriment	DS	1	DS	14 Tage		1	DS	Ja	Nein	Nein	EUR
1	10063	KARTOFFEL PÖRRE...	32	105	205		KTN	4	KG	14 Tage		1	KTN	Ja	Nein	Nein	EUR
1	10067	FRUCHTCKOCKTAIL...	38	105	205	Grundsoriment	DS	1	DS	14 Tage		1	DS	Ja	Nein	Nein	EUR

Aktionen

Dynamic tabs with simple or semi-complex controls (secondary lists; DMS)

- Nested, semi-scrollable data list
- complex inline editing
- Up to 200 dynamic columns
- bulk export / import

## Custom pages / apps

- Common use case modules / mixins
  - DnD, upload, charts, a11y, prototyping...
- Easy to add productivity tooling
  - Runtime model processing / generation
  - Modelling + model-to-text transformation





## Custom pages / apps

### Limitations / issues

- Ramp-up and productivity
  - Learning curve + dev optimization
- Performance and scalability
  - Heap (ACE-5049), page load (ACE-4812), rendition times (Aikau #958)
- Missing key features
  - Forms framework / doclib
- Rich feature extensions vs. easy lib update





2 years of Aikau

Where are we at / What do we want?



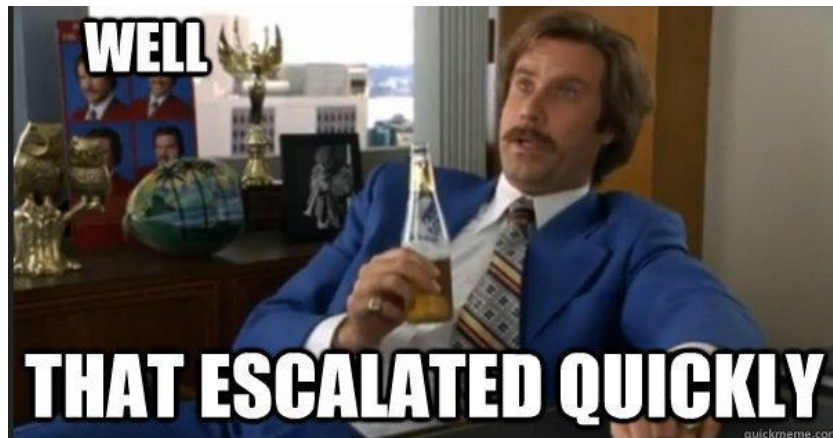
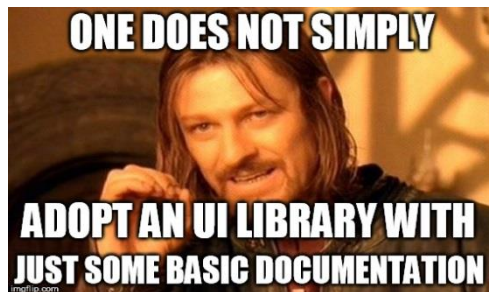


## Where are we at?

- GitHub
  - 3.300+ commits, 80+ releases, 15 contributors (primarily Alfresco)
  - Pillars of Aikau: Dave Draper, Martin Doyle
- Product
  - 5 active + 4 prototype pages + header component
  - Individual components in RM and other (?)
- Community
  - 1 „real“ project (<https://github.com/EisenVault>) + several tutorial runs
  - (Partially) adopted by 3 – 5 in #alfresco
  - Unknown adoption by customers / partners



## Discussing low adoption within the community





## What do we want?

- Clear strategy / timeframe for „updated Share UI“
  - Defined lib + target of X years
  - Eliminate YUI / competing UI libs
- Priority for key functionality / components
  - Who adopts niche UI?
  - Find + fix scalability issues early/earlier
- Extended documentation
  - Architectural / design concepts
  - Implied / expected conventions



Try & adopt Aikau  
Provide feedback / requests  
(Build utilities if necessary)

Consistent + flexible UI layer  
in 5.3 / 6.0?



Dismiss Aikau / discourage its use  
Use / push alternative UI library

Increased UI fragmentation  
Repeat of Aikau growing pains?  
Share replaced with multiple,  
isolated clients?



I, for one, welcome our (new) Aikau overlord



\* Edward Ryon Makuahana Aikau

No alternatives with net benefits

Conceptionally sound

Org. / tech. Issues easy to address

Thank you



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