

Building Canvas Apps – Time to Jump on the Bandwagon

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Jonas Rapp

var jonas = (WhoAmIResponse)service.Execute(new WhoAmIRequest());

Blog:

Microsoft MVP (2017-)

Tech Lead etc. at CRM-Konsulterna, Sweden

Community driven tools (2014-)

100% MS Dynamics "CRM" (2009-)

Software Developer (1994-)

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jonasr.app





Audience

var you = (WhoAreYouResponse)service.Execute(new WhoAreYouRequest());

Know what a Canvas App is?

Know what a PowerApp is?

Know the difference?

Built a Canvas App?

Using it in production?





Agenda

A Brief History

PowerApps today

What are Canvas Apps?

Getting serious

Scenarios

Remaining pain points





A Brief History of MS Biz Apps

• 2003 MS CRM

• 2005 XRM

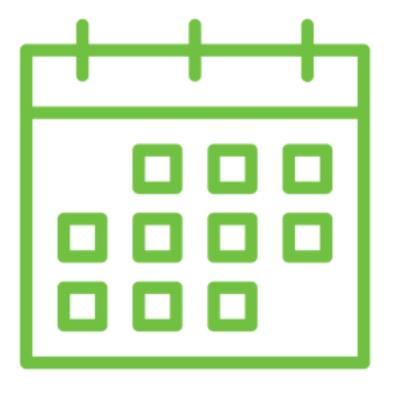
• 2008 Cloud

• 2011 Solutions

• 2016 Dynamics 365

• 2017 Azure

2018 PowerApps





A Brief History of MS Biz Apps

• 1992-202x MS Access

• 1985-21xx MS Excel

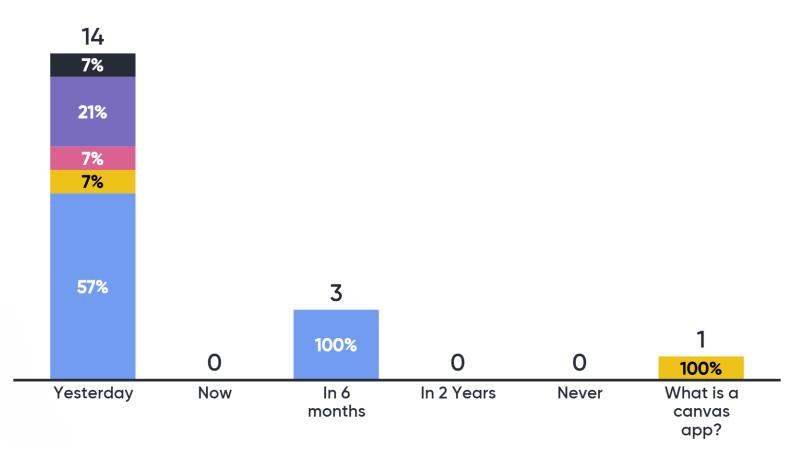
• 1956-2xxx

Rolodex





When would you deploy a Canvas App in production?



Who are you?

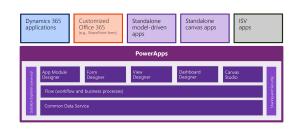
- Partner
- Customer
- ISV
- Microsoft
- Other
- Unknown

Power Platform Saturday Sweden, 2019-10-05





PowerApps today



- aPaaS
 - Application Platform as a Service

jonasr.app/apaas

- LCAP
 - Low-Code Application Platform

jonasr.app/lcap

- PDE
 - Pro-Dev Extensibility

jonasr.app/pde





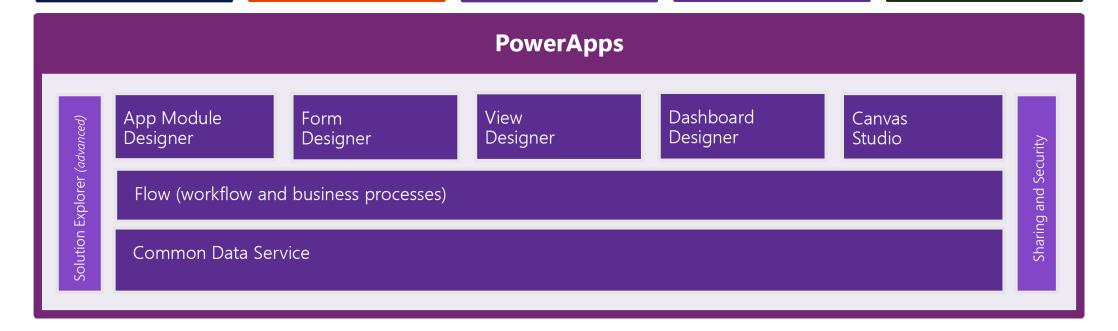
PowerApps today

Dynamics 365 applications

Customized
Office 365
(e.g., SharePoint form)

Standalone model-driven apps Standalone canvas apps

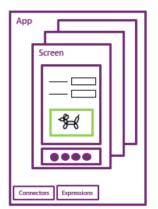
ISV apps

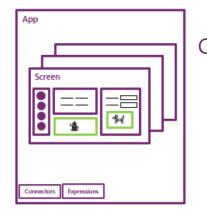




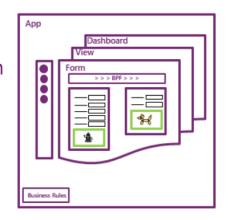


PowerApps today

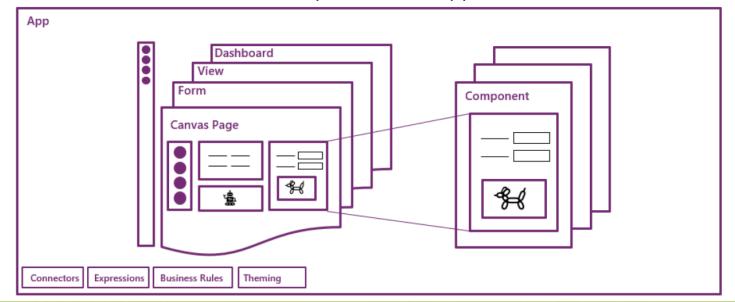


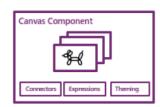


Canvas Model-driven



Full composite PowerApp









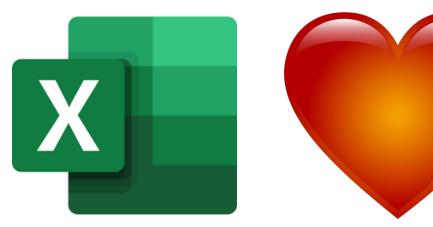
Canvas Apps

So what is it?





It's like Excel and PowerPoint had a love child





- Chris Huntingford

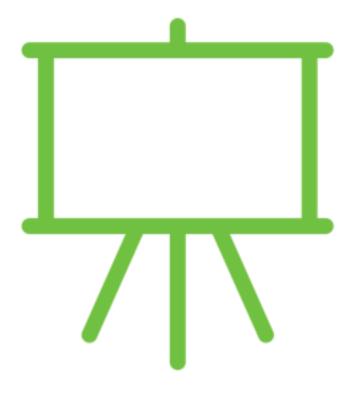




So what is it?

A Blank Canvas for developers

- Pixel Perfect
- Data Source agnostic (almost)
- Declarative behavior control
- Imperative event handlers
- Formulas to help

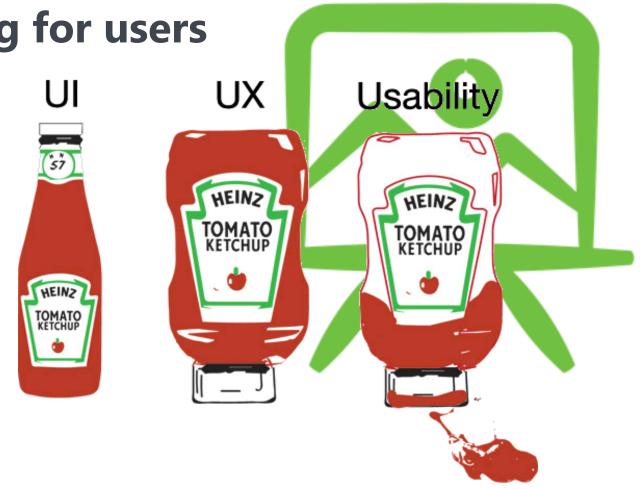




So what is it?

A Pixel Perfect Painting for users

- UI is king
- UX is queen
- Usability
- Task focused
- Ultra tailored





So what is it?

The Last Mile Fix

- Data model ✓
- Processes
- Validation
- Final usability touch
- Connects fragmented info landscape





But it's not serious...

- Playground
- Not for real work
- Lone islands in ocean of EA
- App From Data (it's Model Driven!)
- Business Card Scanner
- No (relatable) success stories
- ALM?





It's getting serious

Architecture

- Solutioning
- Governance
- Delegation
- Offline
- No cliffs









It's getting serious

Building blocks

- New controls
- Components
- Containers
- Responsiveness
- PowerApps Component Framework





It's getting serious

Embedding

- Model-driven apps
- Power BI
- SharePoint

• ...portals...?

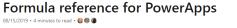




Functions, Signals, Enums, Operators

- Functions
 - Take parameters, returned enumerous to the parameters of the par
 - Sqrt, Navigate, Shuffle sand etc.
- Signals

 - Location, Connectio
- Enumerations
 - Color, ...?
- Named Operators
 - ThisItem, Parent, in,



Formulas combine many elements, Listed below are

- Functions take parameters, perform an operation, and return a value. For example, Sqrt(25) returns 5. Functions are modeled after Microsoft Excel functions. Some functions have side effects, such as **SubmitForm**, which are appropriate only in a behavior

• Parameterless, returned a number in radions of a number in radions of a number in radions.

Atan - Returns the arctangent of a number, in radians

Back - Displays the previous screen

Blank - Returns a blank value that can be used to insert a NULL value in a data source



ClearCollect - Deletes all data from a collection and then adds a set of record

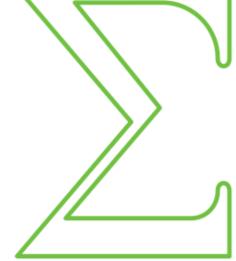
Clock - Retrieves information about the clock for the current locale

Coalesce - Replaces blank values while leaving non-blank values unchanged

Collect - Creates a collection or adds data to a data source

Color - Sets a property to a built-in color value

ColorFade - Fades a color value





Application Lifecycle Management

- Solution awareness
- Solution Packager
- Quality checks
- CDS Current Environment





Native CDS connector

- Current Environment
- Dot-notation
- View selector
- Polymorphic lookups
- Cache
- Directly with CDS OData

```
Accounts.'Primary Contact'.'Full Name'

Lookup(
    Contacts,
    Contact = ThisItem.'Primary Contact'.Contact)
    .'Created By'.'Full Name'

CUPS
```

```
If( IsType( ThisItem.Owner, Users ),
    AsType( ThisItem.Owner, Users ).'Full Name',
    AsType( ThisItem.Owner, Teams ).'Team Name')
```

GALLERY

Gallery1

Properties

Data source

Views

Fields

Layout

Visible

Advanced

None

Active Rockets
Inactive Spaceships

Rockets

Active Rockets

Spaceship Advanced Find View

Spaceship Associated View
Spaceship Lookup View

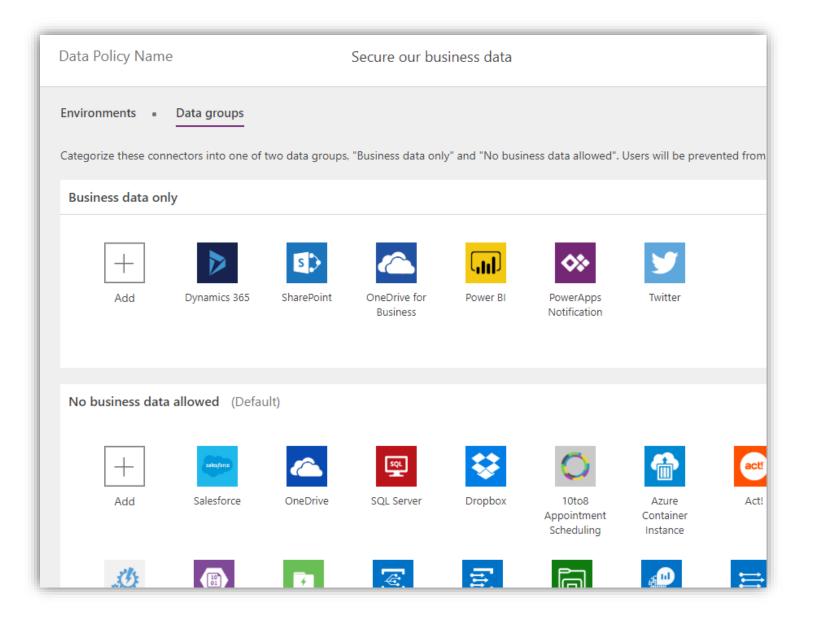




Governance

DLP policies

jonasr.app/dlp







jonasr.app/cdsconn

Delegation

PowerApps delegable functions and operations for the CDS for Apps

These PowerApps operations, for a given data type, may be delegated to the CDS for Apps for processing (rather than processing locally within PowerApps).

Item	Number [1]	Text [2]	Option Set	DateTime [3]	Guid
Filter	Yes			Yes	
Sort	Yes	Yes	0	Yes	
SortByColumns	Yes	Yes	No	Yes	-
Lookup	Yes		Yes	Yes	Ye
=, <>	Yes	Ye	es/es	Yes	У
<, <=, >, >=	Yes			Yes	
And/Or/Not	Yes	Yes	Yes	Yes	Yes
StartsWith	-	Yes	-	-	-
IsBlank	Yes [4]	Yes [4]	No [4]	Yes [4]	Yes
Sum, Min, Max, Avg	Yes [5]	-	-	No	-

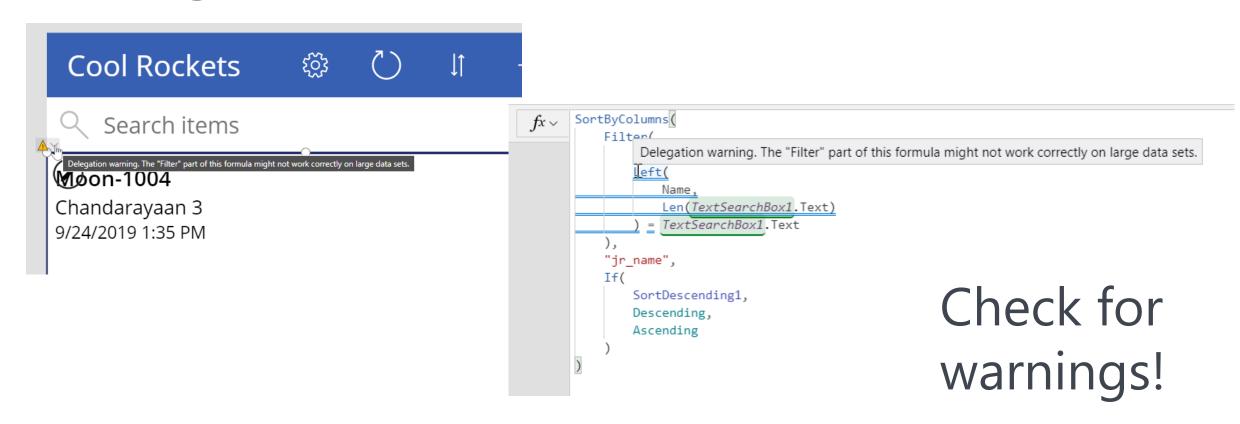
Use delegable!

Check for warnings!





Delegation







Reusable Components

- Visual
 - Map
 - Calendar
 - Tab
 - Dialog
 - Num-up-down
- Non-visual
 - Geo-Fence



jonasr.app/components





PowerApps Component Framework

- Pro-dev
- Customize
 - Fields
 - Lists
- GA / Experimental
- pcf.gallery



jonasr.app/pcf





Canvas Apps

Some scenarios





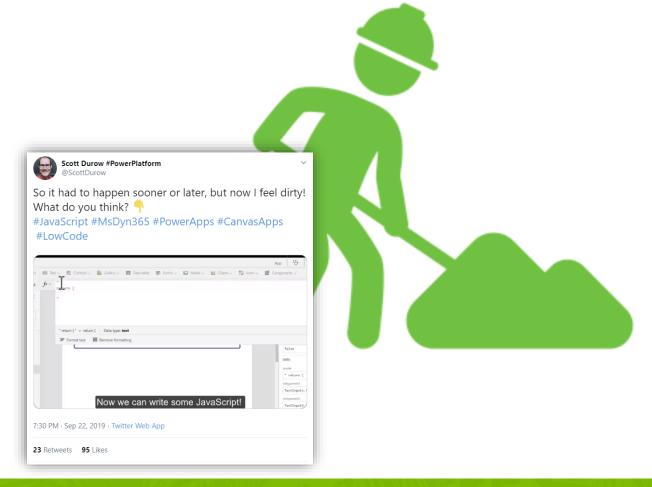
Scenarios from "CRM" perspective

- Task focused
- Click reducing
- Mobile friendly
- On the run
- Rich content in Model Driven
- Canvas worm hole integration



Remaining pain points / risks

- "Code" repository
- ALM gaps
- Governance
- Connections
- Environment Variables
- Injections?









Thank you for attending!



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@rappen



Please submit the survey!





DYNAMIC COMMUNITIES