



# Frameworks de desarrollo para SharePoint: LINQ to SharePoint, PnP, ENMARCHA...

Alberto Diaz Martin

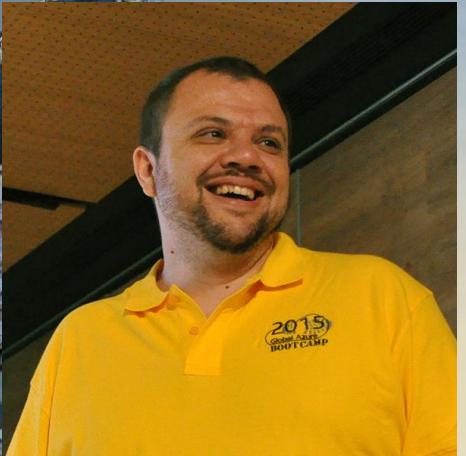


May 7<sup>th</sup>, 2016



SharePoint Saturday  
Madrid





# Alberto Diaz Martin

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ENCAMINA

<http://geeks.ms/blogs/adiazmartin>

adiazcan

Geek, Smartphone lover and Developer

**encamina**  
PIensa en Colores

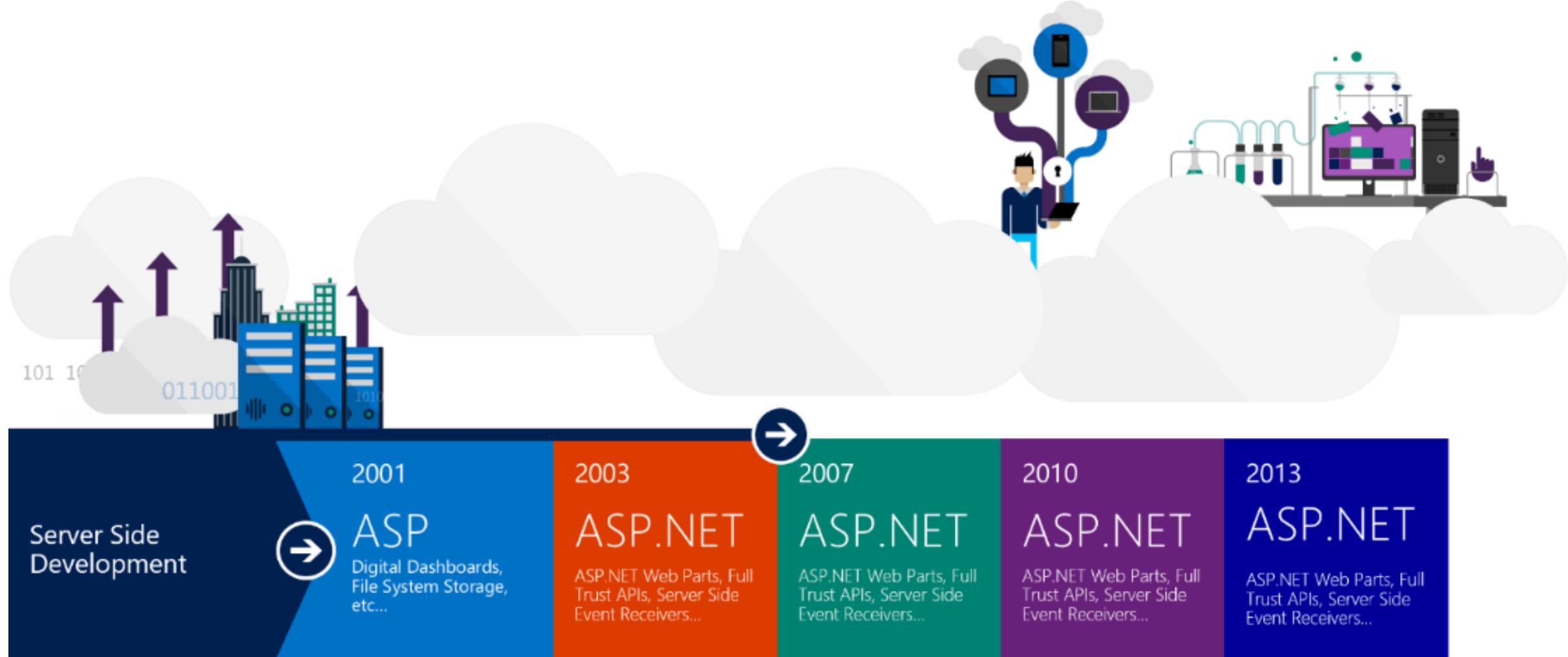
**MVP** Microsoft®  
Most Valuable  
Professional

**Comparti** MOSS

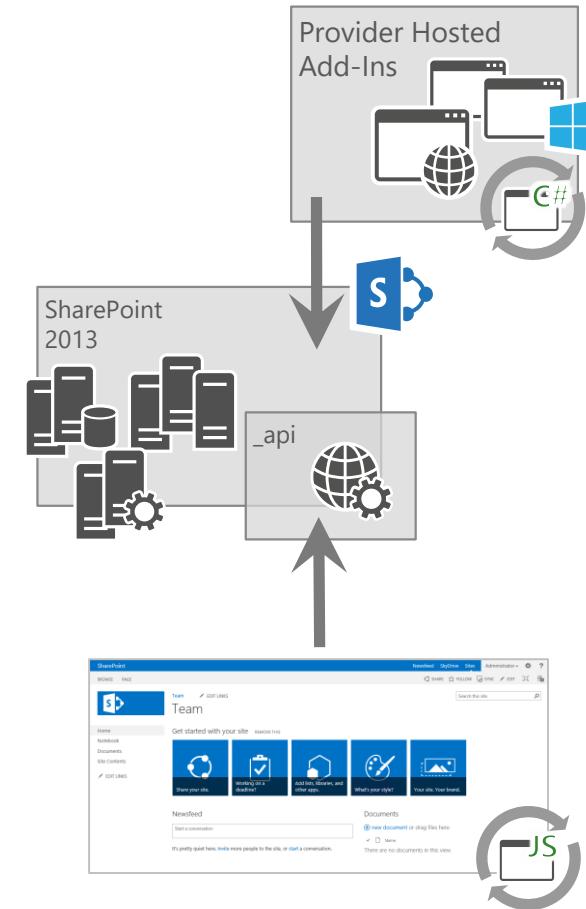
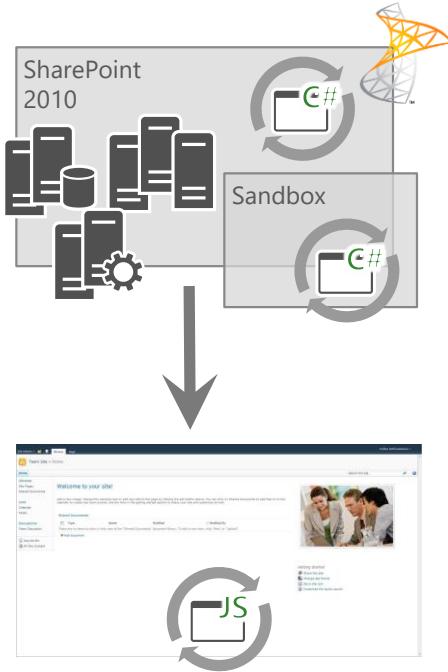
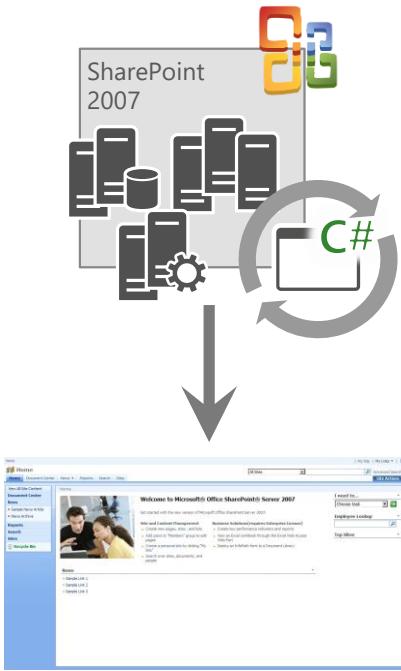
 #spsmad

 SPS  
EVENTS

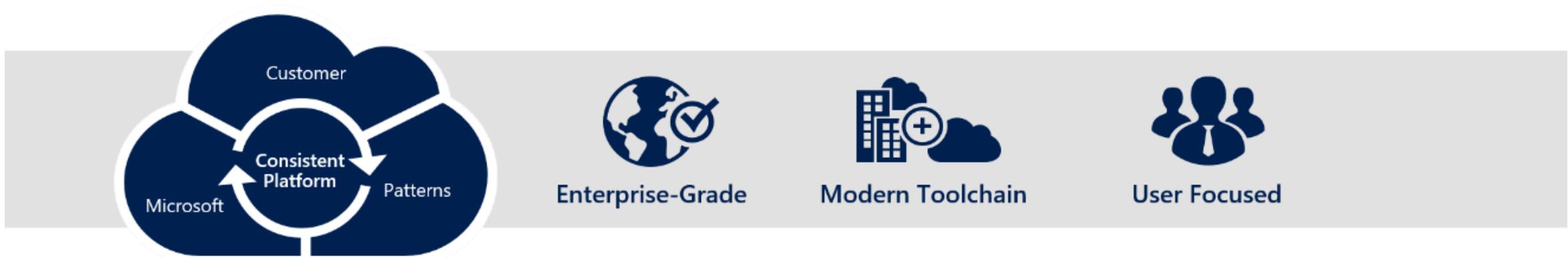
# SharePoint evolves...



# SharePoint evolves...



# SharePoint evolves... 2016



“Will Farm Solutions be Deprecated  
soon ?!?!?”

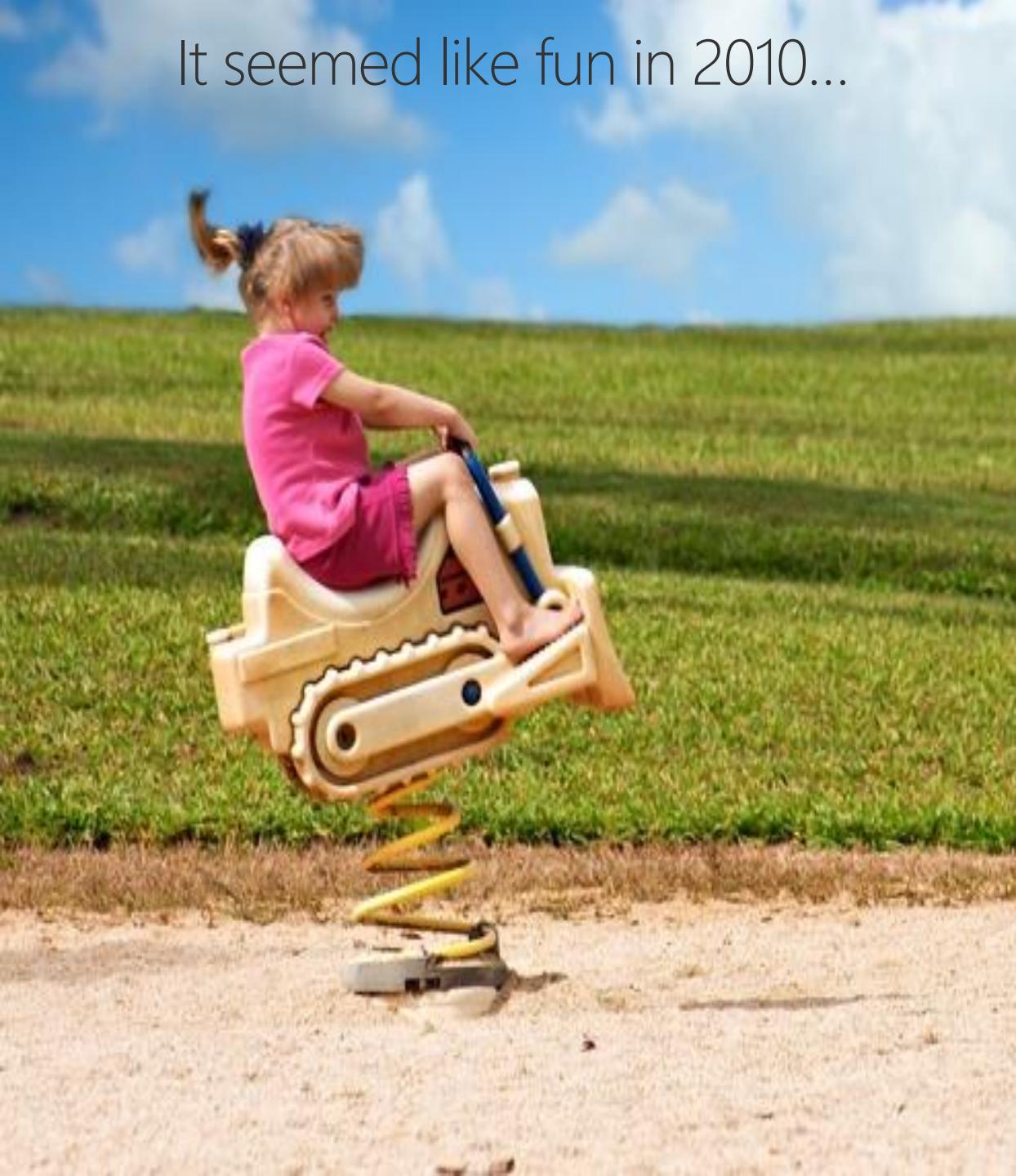
No.

Microsoft uses these approaches to build the product ourselves. BUT, many service providers (not just Office365) restrict their usage for the known challenges they impose.

"OK, but what about sandbox solutions? I was told these are good and cloud ready!"

Well... not really...

It seemed like fun in 2010...



## Sandbox History

October 2009

Sandboxed Solutions announced at SPC 2009  
“Save Site as Template” uses the sandbox

July 2012

Microsoft ships Design Manager, which is based on  
Sandboxed Solutions  
New App Model is announced  
Sandbox deprecated for SharePoint 2013

January 2014

Solutions Gallery is spared (for the time being)

January 2015

Microsoft PnP team says, “Stay out of the sandbox!”

# “Wait? No feature framework?”

We are indeed gradually moving away from feature framework to alternative patterns...

# App model = Add-in model

Marketing terminology change done spring 2015, which was only done for marketing messaging purposes.

# What does add-ins mean in our terminology

SharePoint Add-Ins means all operations which are executed outside of the server

## Classic - Full trust solutions

- ISV solutions
- Platform level customizations to on-premises
- Custom service applications
- Custom WCF services
- SharePoint customizations, not customer specific customizations



## Client Side Solutions

- Server side controls as JavaScript on page layouts and master pages
- Remote provisioning for elements
- Embracing un-ghosted model
- SP App dimension with provider hosted apps to provide new capabilities
- Customer specific customizations

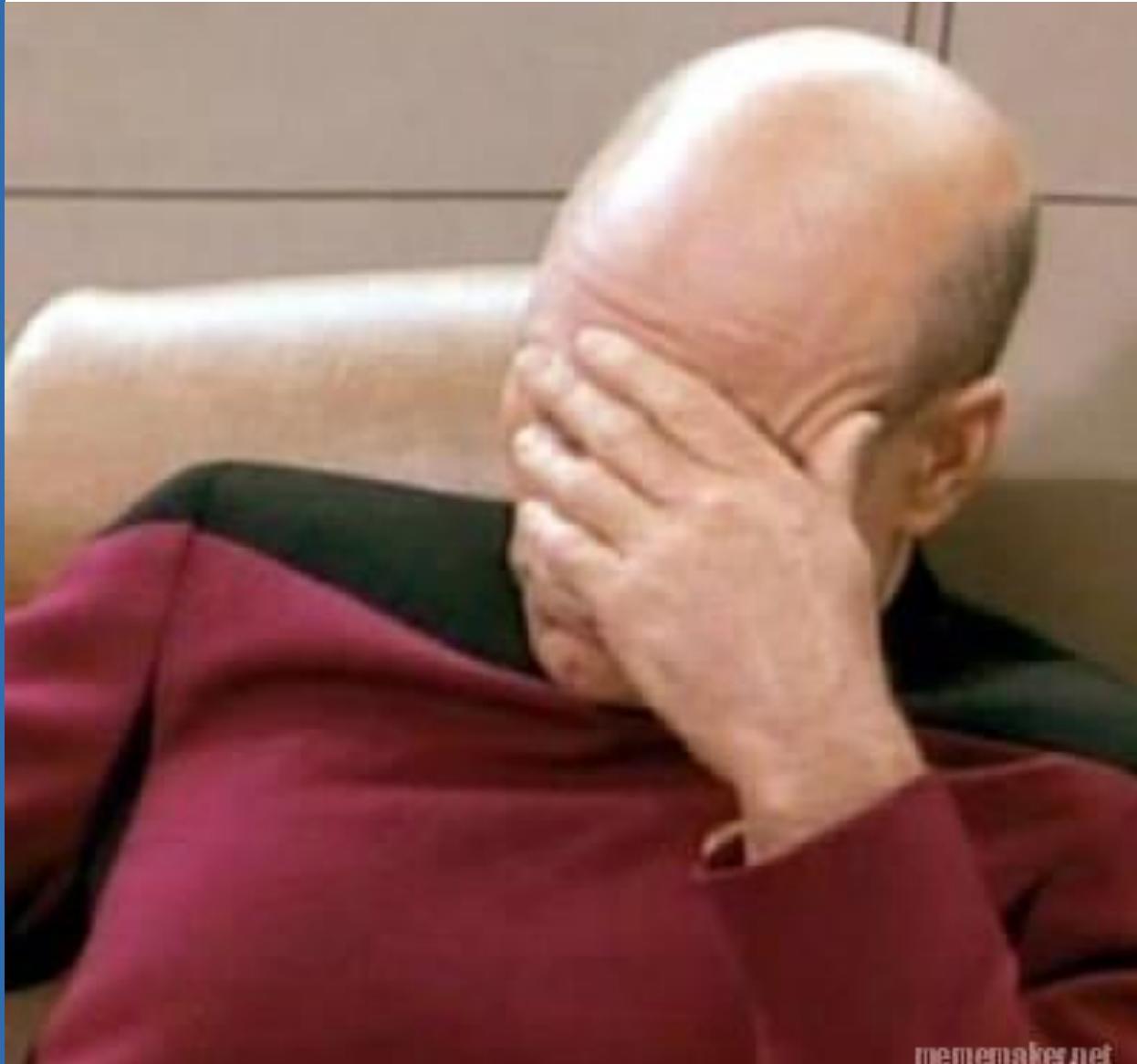


## Store apps

- App catalog based solution
- Packaged reusable solutions built for specific functionality
- Not only for market place or store, but also as platform for customer specific customizations



Remember when feature  
framework and solutions where  
introduced...



mememakers.net

encamina  
PIENSA EN COLORES

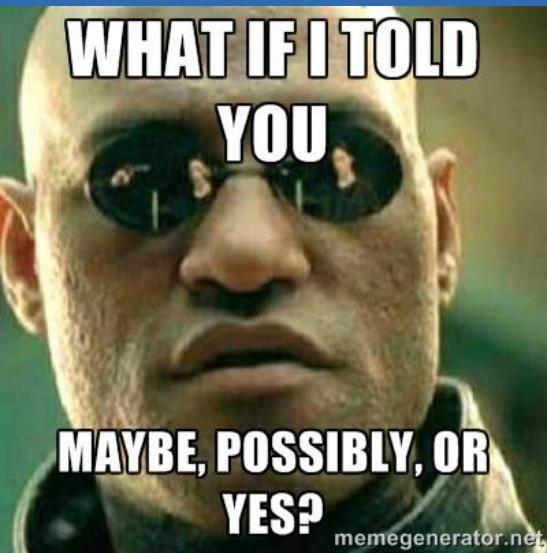


Or when you were told that you'll  
have to learn CAML...

# Transforming your code

From farm solutions and full trust code...

To app model...



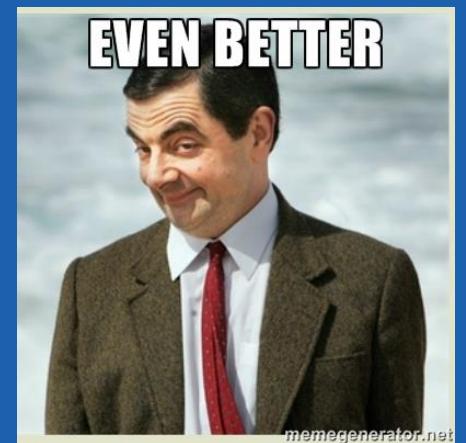
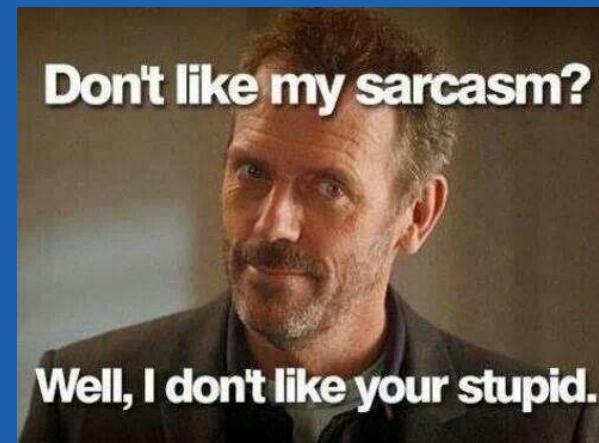
“Will Farm Solutions be supported with SharePoint Server 2016?”

Yes.

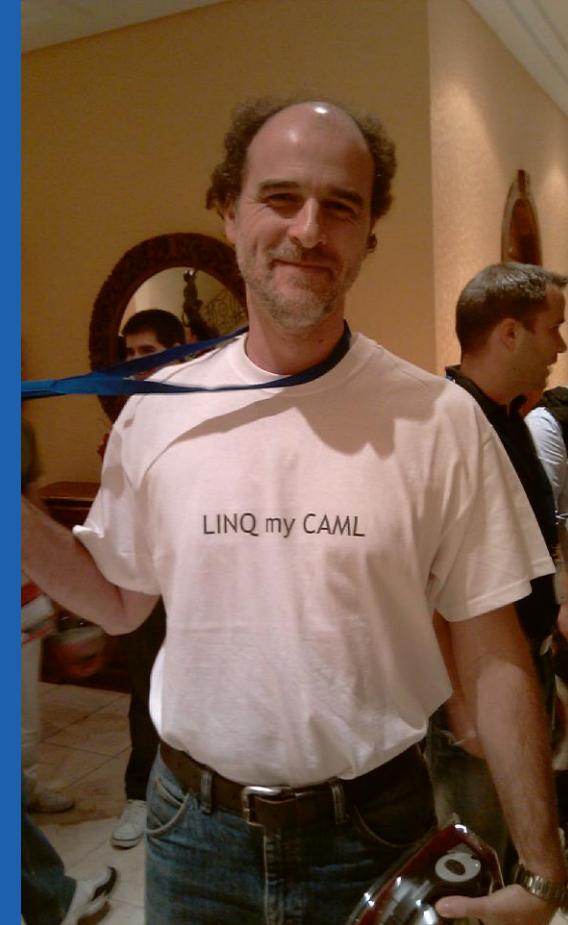
Microsoft will make investments mainly on the app model side also for on-premises to better align the development story: write once and use it cross cloud and on-premises

# Frameworks de Desarrollo

Hagamos de SharePoint un servidor mejor



# LINQ to SharePoint



# SharePoint Data Technologies



# Querying SharePoint

```
<Query>
  <Where>
    <Or>
      <Geq>
        <FieldRef Name="Field1" />
        <Value Type="Number">1500</Value>
      </Geq>
      <Leq>
        <FieldRef Name="Field2" />
        <Value Type="Number">500</Value>
      </Leq>
    </Or>
  </Where>
</Query>
```

# And the Code to get There...

```
SPQuery query = new SPQuery();
StringBuilder sbQuery = new StringBuilder();
sbQuery.Append("<where>");
sbQuery.Append("<geq>");
sbQuery.Append("<fieldref name=\"" + fieldName1 + "\"/>");
sbQuery.Append("<value type=\"" + fieldType1 + "\">" + field
    Value1 + "</value>");
sbQuery.Append("</geq>");
sbQuery.Append("</where>");
query.Query = sbQuery.ToString();
```

# LINQ

```
var CommonWords =  
    from w in wordOccurrences  
    where w.Count > 2  
    select new { f.Name, w.Word, W.Count };
```

Query  
expressions

Local variable  
type inference

```
var CommonWords =  
    wordOccurrences  
    .Where(w => w.Count > 2)  
    .Select(w => new {f.Name, w.Word, W.Count });
```

Lambda  
expressions

Extension  
methods

Anonymous  
types

Object  
initializers

# LINQ to SharePoint

```
from p in dataContext.Projects  
where p.Client.City == "Durban"  
select new  
{  
    Name = p.Title,  
    ClientName = p.Client.Title,  
    Budget = p.BudgetHours  
};
```

# LINQ to SharePoint – Some limitations

- Unsupported Queries & Limits
  - E.g. unsupported JOINS
  - Join Limits - MS recommends < 8
  - Query Throttling
- 2-stage queries
  - E.g. Aggregate, Distinct, Max, Min, Sum, SkipWhile
- Cross-site-collections
- Anonymous users

# PnP

## Office 365 Developer Patterns & Practices



Developer  
Patterns & Practices

# “Sharing is caring”

[aka.ms/OfficeDevPnP](http://aka.ms/OfficeDevPnP)

[aka.ms/OfficeDevPnPYammer](http://aka.ms/OfficeDevPnPYammer)  
[aka.ms/OfficeDevPnPMSDN](http://aka.ms/OfficeDevPnPMSDN)  
[aka.ms/OfficeDevPnPVideos](http://aka.ms/OfficeDevPnPVideos)  
[aka.ms/OfficeDevPnPTraining](http://aka.ms/OfficeDevPnPTraining)

The screenshot shows the homepage of the Patterns and Practices website. At the top, there's a navigation bar with links for Office, Dev Center, Opportunity, Getting Started, Transform, Resources, Showcase, and Documentation. Below the navigation is a yellow header with the text "Patterns and Practices" and some decorative icons. The main content area has tabs for Samples, Scenarios, Solutions, and Guidance. A section titled "About Patterns and Practices" includes a grid of 16 small portraits of team members. Below this is a "Contact" section with a note about joining the team to provide samples. A "How to get started or contribute?" section provides details on GitHub usage. The "Latest News" section lists several recent posts. The "Themes" section includes a "Recent Samples" sidebar with links to various samples like "From Admin Triad to Readify" and "From ECM Document to Microsoft". The "Recent Videos" section features a video thumbnail for "Office 365 Development Patterns & Practices" by Core JavaScripters. The "Recent Podcasts" section lists episodes from the "encamina PIENSA EN COLORES" series.

encamina  
PIENSA EN COLORES



# Office 365

Developer  
Patterns & Practices

Code samples

Guidance documentation

Monthly community calls

Case Studies

Sharing is caring...

## Themes

Site Provisioning

Branding

Remote processing

Embed JavaScript

<http://aka.ms/OfficeDevPnP>



# OfficeDevPnP.Core

The library provides:

Extension methods

Solution components (provisioning, remote timer-jobs, etc.)

Distributed as a Nuget package

Monthly releases

# Add CT to List without OfficeDevPnP.Core

```
string contentTypeName = "Content Type To Add";
IEnumerable<ContentType> results = web.Context.LoadQuery<ContentType>(ctCol.Where(item => item.Name == contentTypeName));
web.Context.ExecuteQuery();
var contentType = results.FirstOrDefault();
List list = GetListWeGotFromSomeWhere();
//Code to Throw if CT does not exist

//Code to do nothing if CT is already in list
if (!list.IsPropertyAvailable("ContentTypesEnabled"))
{
    list.Context.Load(list, l => l.ContentTypesEnabled);
    list.Context.ExecuteQuery();
}
list.ContentTypesEnabled = true;
list.Update();
list.Context.ExecuteQuery();
list.ContentTypes.AddExistingContentType(contentType);
list.Context.ExecuteQuery();
// Set the default content type
if (defaultContent)
{
    ContentTypeCollection ctCol = list.ContentTypes;
    list.Context.Load(ctCol);
    list.Context.ExecuteQueryRetry();
    var ctIds = new List<ContentTypeId>();
    foreach (ContentType ct in ctCol)
    {
        ctIds.Add(ct.Id);
    }
    // remove the folder content type
    var newOrder = ctIds.Except(ctIds.Where(id => id.StringValue.StartsWith("0x012000")))
        .OrderBy(x => !x.StringValue.StartsWith(contentType.Id.ToString(), StringComparison.OrdinalIgnoreCase))
        .ToArray();
    list.RootFolder.UniqueContentTypeOrder = newOrder;
    list.RootFolder.Update();
    list.Update();
    list.Context.ExecuteQuery();
    SetDefaultContentTypeToList(list, contentType);
}
```

# Add CT to List with OfficeDevPnP.Core

```
web.AddContentTypeToListByName(  
    "ListName",  
    "ContentTypeName",  
    defaultContentType: true,  
    searchContentTypeInSiteHierarchy: true  
);
```

# PnP Provisioning Engine

## Framework for easily doing Remote Provisioning

Part of the OfficeDev PnP Core component

Object oriented engine for easy and fast Remote Provisioning

### Capabilities

Automated Remote Provisioning

Easy Site Template Generation/Extraction

Available in Microsoft .NET

There are PowerShell extensions for common tasks

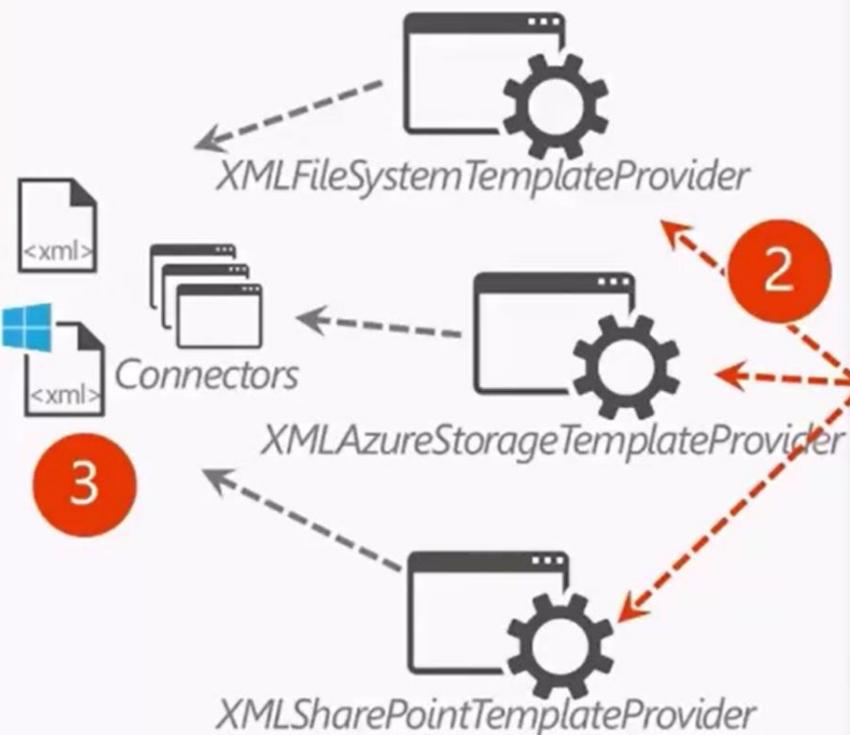
Export/Import of templates in a formatter-independent manner

XML Schema

JSON

Whatever else...

# PnP Provisioning Engine



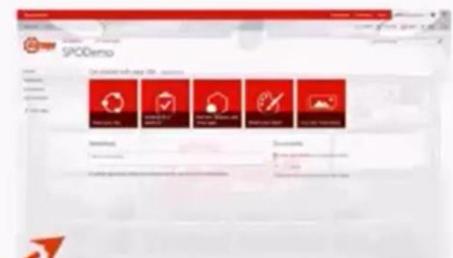
// Get template from existing site  
template = ctx.Web.GetProvisioningTemplate();

// Save template using provider  
XMLFileSystemTemplateProvider provider = new  
XMLFileSystemTemplateProvider(@"c:\temp\"");  
provider.SaveAs(template,"template.xml");

// Apply template to existing site  
ctxTarget.Web.ApplyProvisioningTemplate(template);



Site A



Site B

*enmarcha*  
by ENCAMINA



ENMARCHA es un framework que permite crear aplicaciones SharePoint de una manera más rápida y libre de errores

ENMARCHA SharePoint afecta a la versión de SharePoint 2013 *On Premise*, proveyendo una capa de abstracción que facilita la interacción con los datos de la plataforma

Permite realizar de manera sencilla:

Operaciones CRUD sobre elementos de listas y bibliotecas

Administrar los permisos de usuarios y grupos

La creación de sitios y subsitios

El aprovisionamiento de artefactos SharePoint.

# ENMARCHA en acción

Creamos un Repositorio para acceder a SharePoint

```
var logger = new LogManager().GetLogger(new System.Diagnostics.StackTrace().GetFrame(0));
var repository= new SharePointRepository<Employed>(web,logger,listName,10);
```

Realizamos una consulta

```
var query = new Query().Where().Field("Name",string.Empty).Operator(TypeOperators.Eq).Value("Text","Adrian");
queryCollection = repository.Query(query, 1);
```

Crear grupos de sitio

```
web.CreateGroup("Test",SPRoleType.Reader);
```

Gestionar los permisos

```
list.AddPermissionLibrary("Test", RoleType.Contributor);
```

## Caso de prueba: SharePoint vs. ENMARCHA SharePoint



# SharePoint

# ENMARCHA

```
public static readonly Guid MyFieldId =
    new Guid("{891B57CF-B826-4B0C-9EDF-8948C824D96F}");
public static readonly string MyFieldDefXml =
    "<Field ID=\"{CC1E421C-29BE-4373-81D0-55D5D64B2E3D}\" +
     \" Name=\"MyFieldName\" StaticName=\"MyFieldName\" +
     \" Type=\"Text\" DisplayName=\"My Field Name\" +
     \" Group=\"My Columns\" DisplaceOnUpgrade=\"TRUE\" />";

if (web.AvailableFields.Contains(MyFieldId) == false)
{
    web.Fields.AddFieldAsXml(MyFieldDefXml);
}

public static readonly SPContentTypeId myContentTypeId
    = new SPContentTypeId("0x010100FA0963FA69A646AA916D2E41284FC9D9");

SPContentType myContentType = web.ContentTypes[myContentTypeId];

if (myContentType == null)
{
    myContentType = new SPContentType(myContentTypeId,
        web.ContentTypes, "My Content Type");

    web.ContentTypes.Add(myContentType);
}

SPField field = web.AvailableFields[MyFieldId];
SPFieldLink fieldLink = new SPFieldLink(field);

if (myContentType.FieldLinks[fieldLink.Id] == null)
{
    myContentType.FieldLinks.Add(fieldLink);
}

myContentType.Update(true);
```

```
[Enmarcha(AddPrefeix = false, Create = false, Type = TypeField.Text)]
public string ID { get; set; }
[Enmarcha(AddPrefeix = false, Create = true, Type = TypeField.Text, DisplayName = "First Name")]
public string Name { get; set; }
[Enmarcha(AddPrefeix = false, Create = true, Type = TypeField.Text, DisplayName = "Last Name")]
public string LastName { get; set; }
[Enmarcha(AddPrefeix = false, Create = true, Type = TypeField.DateTime, DisplayName = "Date of Born")]
public DateTime DateBorn { get; set; }

var columnSite = web.CreateColumnSite("ENMARCHA ContentType", typeof(Employed));

web.CreateContentType("EmployedBussines", "ENMARCHA", "Elemento", columnSite);

web.CreateList("Empleados", "Lista de Empleados", TypeList.GenericList, true);
var list = web.Lists.TryGetList("Empleados");
list.AddContentTypeLibrary("EmployedBussines");
```



# GitHub



<https://github.com/Encamina/Enmarcha-SharePoint>

## ENMARCHA Open Source

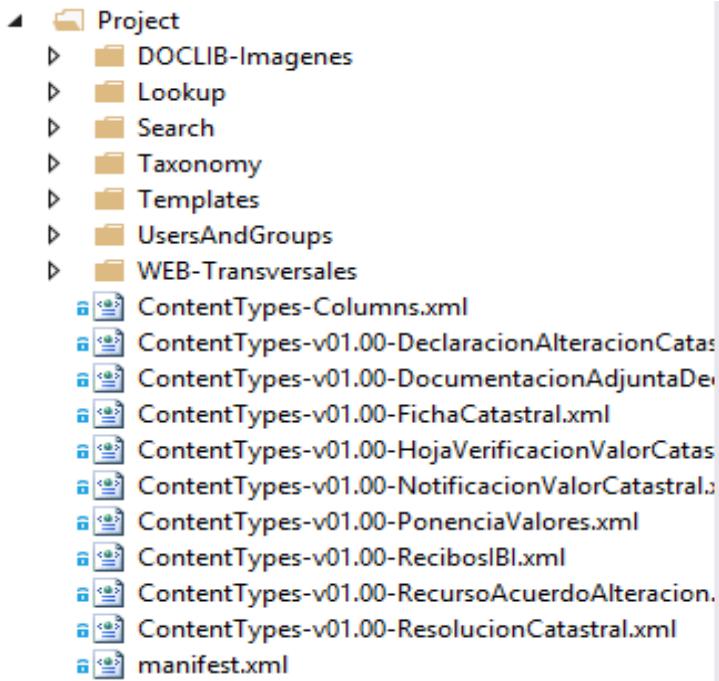
La opción elegida ha sido la de publicar ENMARCHA SharePoint en **GitHub**, un repositorio muy extendido que fomenta la colaboración entre todos sus usuarios, permitiendo proponer actualizaciones sobre el código de una manera controlada

También es posible utilizar el Framework sin necesidad de descargar el código a través de la herramienta Nuget mediante el comando:

Install-Package Enmarcha.SharePoint

# ENMARCHA SharePoint PowerShell

- Provisionado en servidor
- Definición de artefactos de SharePoint en XML
- Acciones para CRUD de artefactos
- Integración Continua



► Project  
  ↳ ActivateRatings.ps1  
  ↳ AdditionalEndCommands.ps1  
  ↳ ContentTypeFunctions.psm1  
  ↳ ContentTypeXmlFunctions.psm1  
  ↳ CreateSite.ps1  
  ↳ Deploy-Solution.ps1  
  ↳ Deploy-UserSolution.ps1  
  ↳ EnmarchaFunctions.psm1  
  ↳ GroupFunctions.psm1  
  ↳ Lookups.ps1  
  ↳ New-AssetsLib.ps1  
  ↳ New-Doc.ps1  
  ↳ New-DocLib.ps1  
  ↳ New-DocLibPaginas.ps1  
  ↳ New-ImgLib.ps1  
  ↳ New-List.ps1  
  ↳ New-ListItem.ps1  
  ↳ New-Navigation.ps1  
  ↳ New-Page.ps1  
  ↳ New-Site.ps1  
  ↳ New-Web.ps1  
  ↳ ProvisioningSiteColumns.ps1  
  ↳ SearchFunctions.psm1  
  ↳ SecurityFunctions.psm1  
  ↳ SecurityXmlFunctions.psm1  
  ↳ TaxonomyCustomProperties.ps1  
  ↳ TaxonomyFunctions.psm1



# SharePoint Framework

Open and Connected Platform



SharePoint

- Search
- Home
- Conversations
- Files
- Calendar
- Lists
- Insights

SHARE UNFAVORITE EDIT

## Business Dev Team

The central business development team for Gogogo

### Favorites

New battery chemicals... Article Updated June 7, 2015 by Karen Bell

GoSwap Station Projects Article Updated June 7, 2015 by Karen Bell

### KPI Monitors

Perfect Order Rate: 94.45% (94.10% last month)

Units Per Transaction: -\$87.16 (AVP) (Compared to \$88.10 last month)

Social Visits Per Day: 3.20 (UVP) (Compared to 4.80 last month)

### Files

+ New Upload Share View

Name	Modified	Source
Sales	1:12pm	Business Dev Team

### Team Activity

All Conversations Files Start a Conversation

TODAY

Karen Bell 9:02 am P Invited 2 people to this site.

TW 9:10 am Hey does anyone know where I can find the sales folder from the meeting the other day?

Owen Hennessy 9:11 pm Mentioned you on Twitter

Owen Hennessy 9:11 pm @sallyreynolds Just saw the new Main Street station opened! YEAH! #Gogogo

Sally Reynolds 9:15 am P Uploaded Q3 Deployment Estimates to Documents.

Q3 Deployment Estimates

Open

Carrier 8:08 AM 100%

## Business Dev Team

SharePoint site

Home Links Sites People Settings

### Favorites

New battery chemicals... Article Updated June 7, 2015 by Karen Bell

GoSwap Station Projects Article Updated June 7, 2015 by Karen Bell

### KPI Monitors

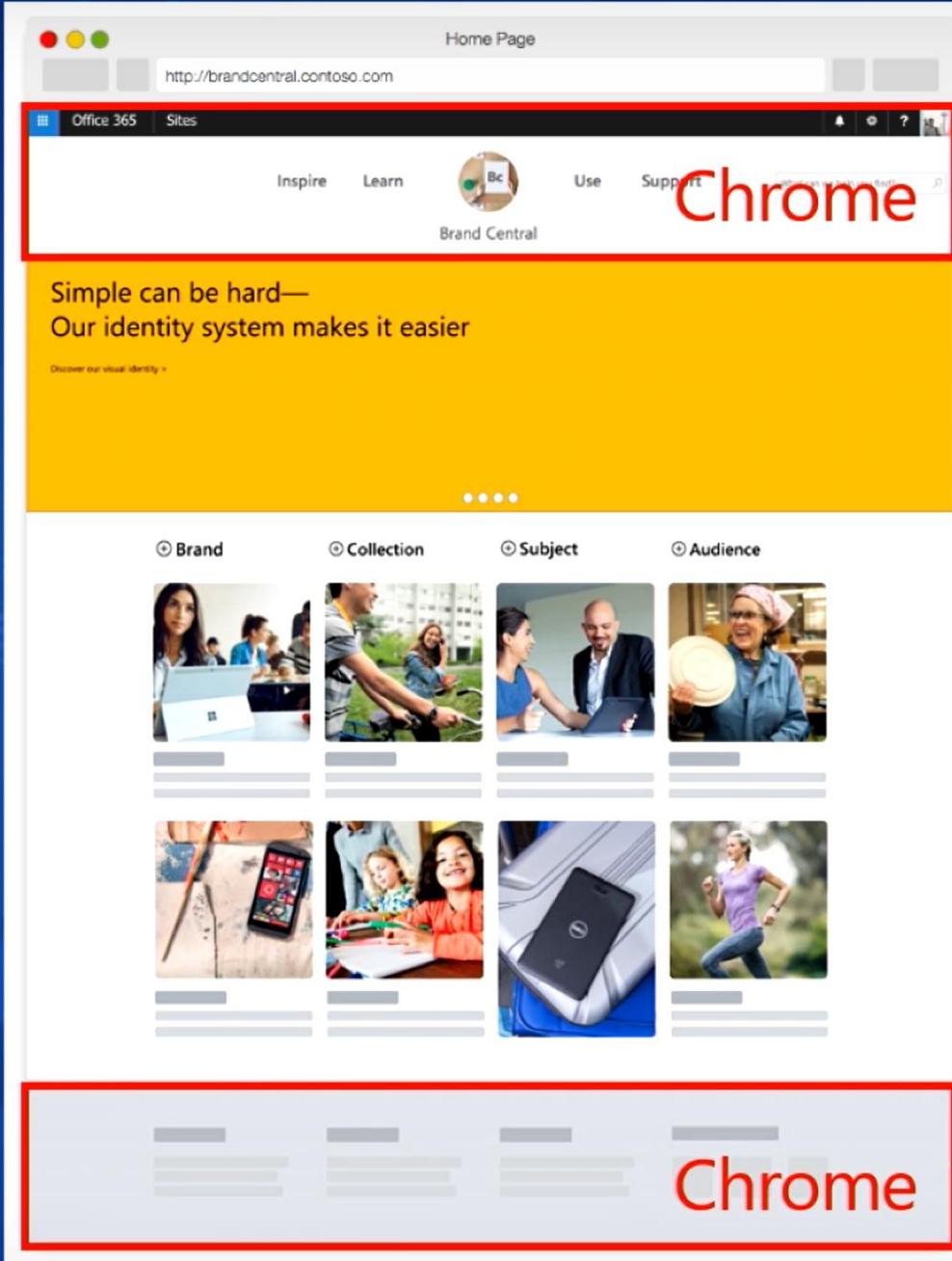
Perfect Order Rate: 94.45% (94.10% last month)

Units Per Transaction: -\$87.16 (AVP) (Compared to \$88.10 last month)

Social Visits Per Day: 3.20 (UVP) (Compared to 4.80 last month)

# SharePoint Framework

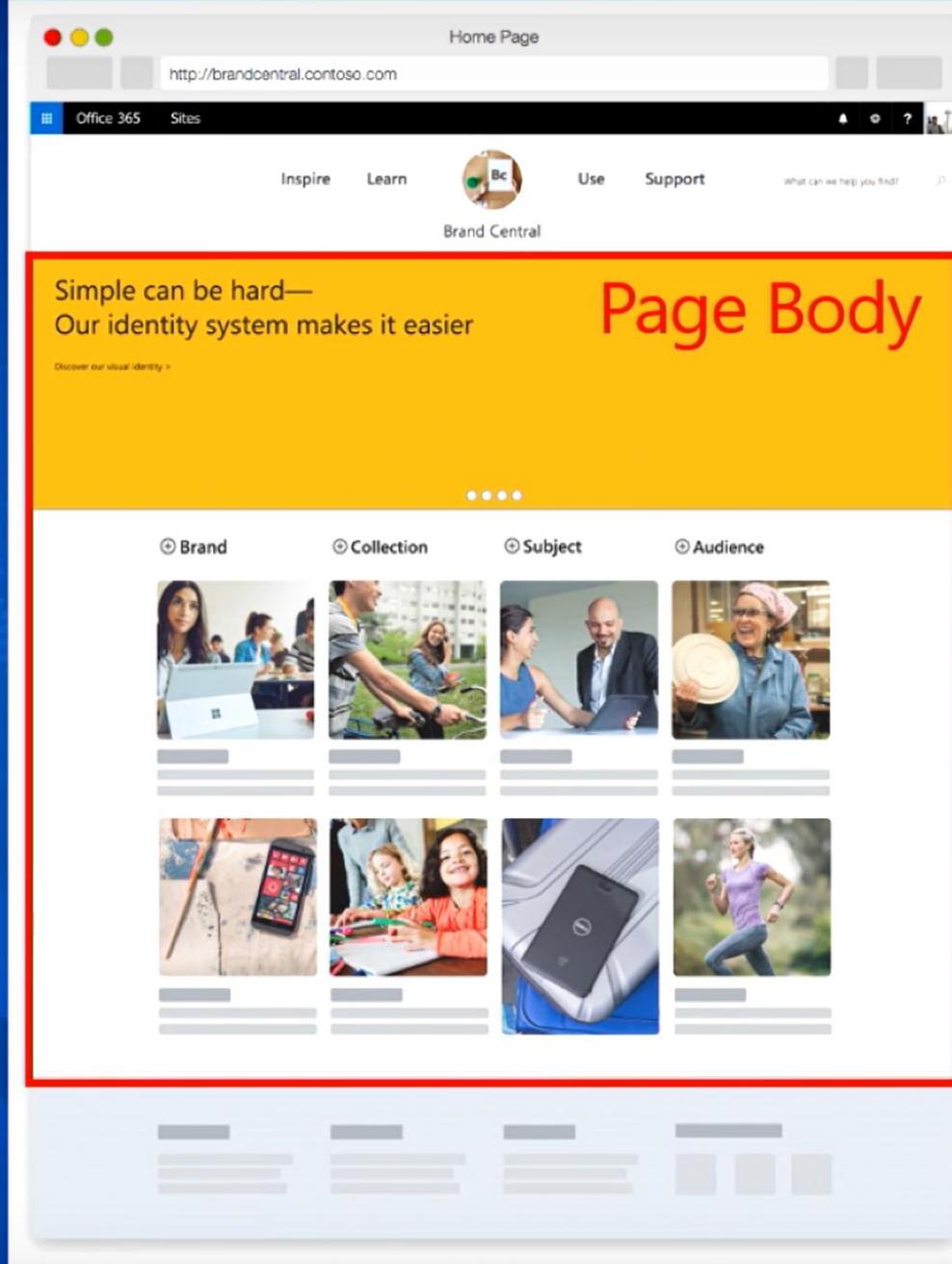
## Page Structure

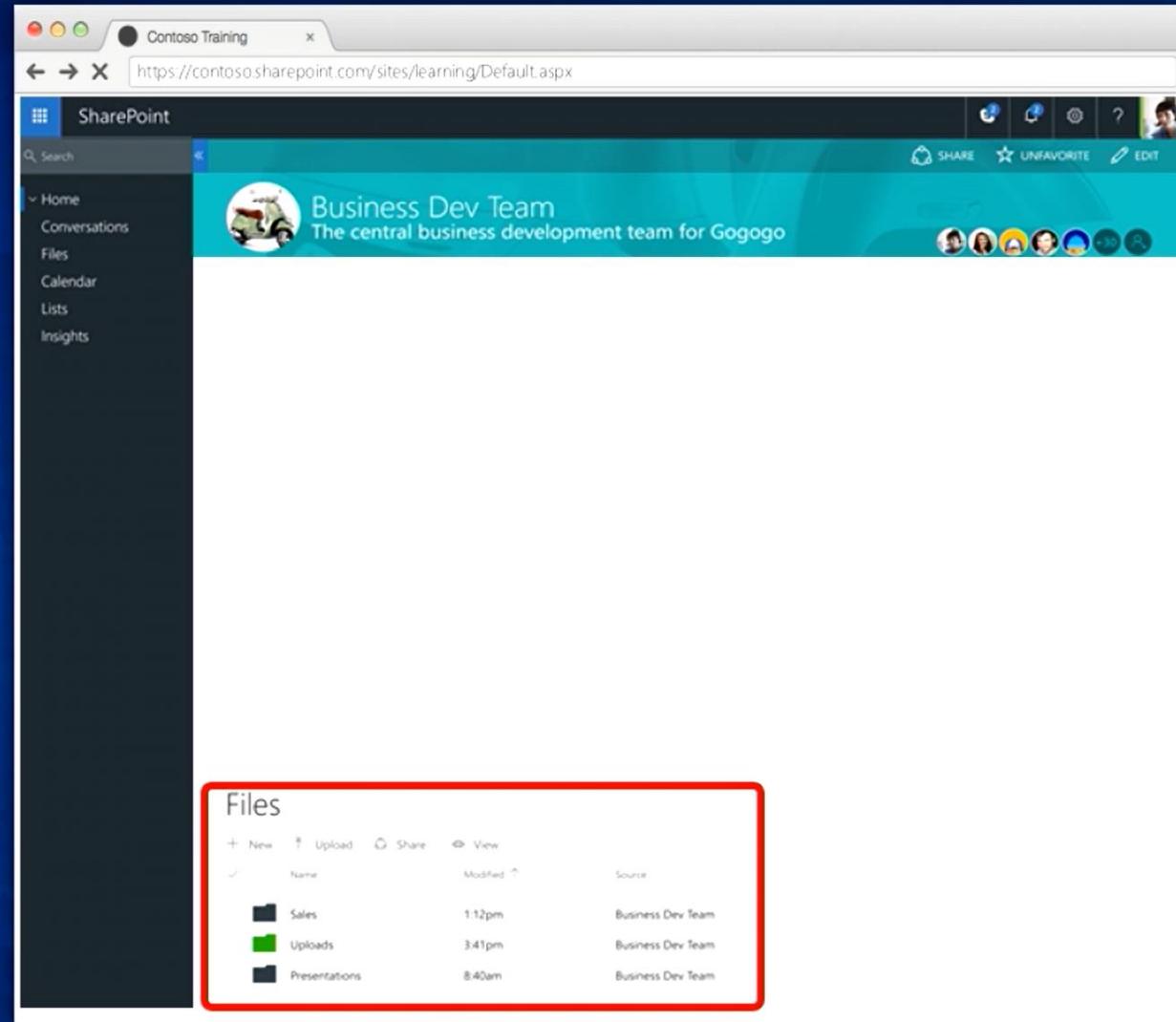


Data Broker  
Cache  
Authentication  
Telemetry

# SharePoint Framework

## Page Structure





# Web Parts & Canvas

A screenshot of a SharePoint site titled "Business Dev Team". The page features a navigation bar on the left with links for Home, Conversations, Files, Calendar, Lists, and Insights. The main content area displays a "KPI Monitors" web part, which includes three cards: "Perfect Order Rate" (94.45%, up from 94.30% last month), "Units Per Transaction" (\$87.16, down from \$88.10 last month), and "Social Visits Per Day" (3.20, up from 3.00 last month). Below the KPIs is a "Files" section showing a list of items: Sales (modified 1:12pm), Uploads (modified 3:41pm), and Presentations (modified 8:40am). The "Sales" item is highlighted with a red border.

Azure  
...or 3rd Party Provider Hosted App

SharePoint Exchange Delve  
Office 365

# Web Parts & Canvas

encamina  
PIENSA EN COLORES

A screenshot of a SharePoint site titled "Business Dev Team". The page features a "Favorites" section with two items, both highlighted with a red border:

- New battery chemicals... Article
- GoSwap Station Projects Article

Below the favorites, there's a "KPI Monitors" section displaying three metrics:

- Perfect Order Rate: 94.45% (94.80% last month)
- Units Per Transaction: \$87.16 (Compared to \$86.10 last month)
- Social Visits Per Day: 3.20 (Compared to 4.80 last month)

The "Files" section shows three uploaded files:

Name	Modified	Source
Sales	1:12pm	Business Dev Team
Uploads	3:41pm	Business Dev Team
Presentations	8:40am	Business Dev Team

Azure  
...or 3rd Party Provider Hosted App

SharePoint Exchange Delve

Office 365

# Web Parts & Canvas

The screenshot shows a SharePoint site for the 'Business Dev Team'. The page includes a navigation bar with links like Home, Conversations, Files, Calendar, Lists, and Insights. Below the navigation is a header for the 'Business Dev Team' with a sub-header 'The central business development team for Gogogo'. A 'Favorites' section displays two items: 'New battery chemicals...' and 'GoSwap Station Projects'. Under 'KPI Monitors', there are three cards: 'Perfect Order Rate' at 94.45%, 'Units Per Transaction' at \$87.16, and 'Social Visits Per Day' with a chart showing fluctuating data. The 'Files' section lists three items: 'Sales', 'Uploads', and 'Presentations'. A red box highlights a 'Team Activity' web part, which shows a feed of posts from users like Karen Bell, Tim Watts, and Owen Hennessy, each with interaction counts (Likes, Comments, Shares).

# Azure

...or 3rd Party Provider Hosted App

SharePoint

Exchange

Delve

# Office 365

# Web Parts & Canvas

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August 31, 2015

Peter Tafoya

# Modern S

Much like the Model T, the first motorized scooters were rather practical animals. At vero eos et accusamus et iusto duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliqua. Ut vero eos et accusamus et iusto duo dolores et ea rebum.

3 Comments

Back in My Day...

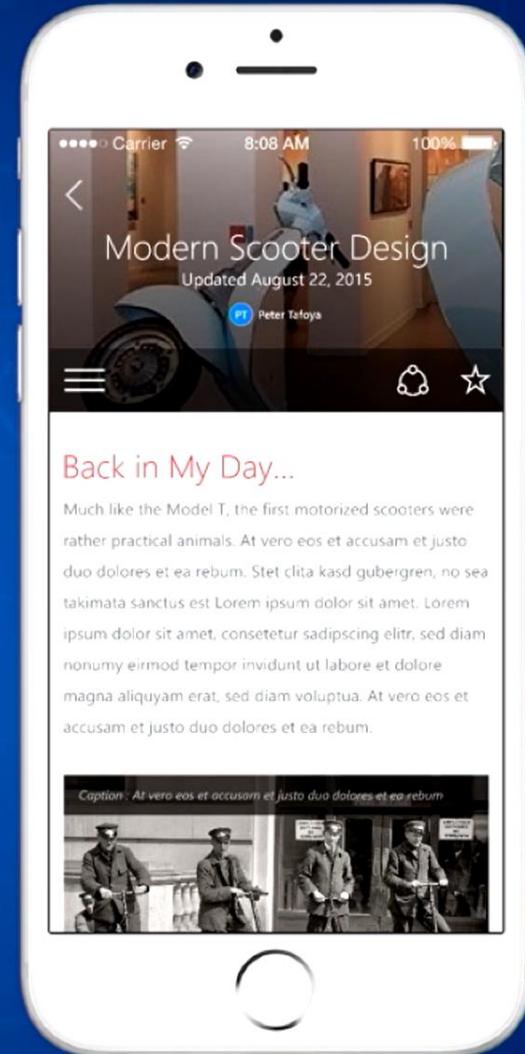
Save Undo Guides Background Send to Review Add Item

✓ page saved 2 min ago Preview

Search

POPULAR WEB PARTS

- Power BI
- Gallery
- Sway
- Content by Search
- Analytics
- Event Calendar
- Planner
- More



# Publishing

 Save Draft Cancel Save

Home



New Publishing Site

Notebook

Documents

Recent

Src

Site Contents

This is a very cool web part.

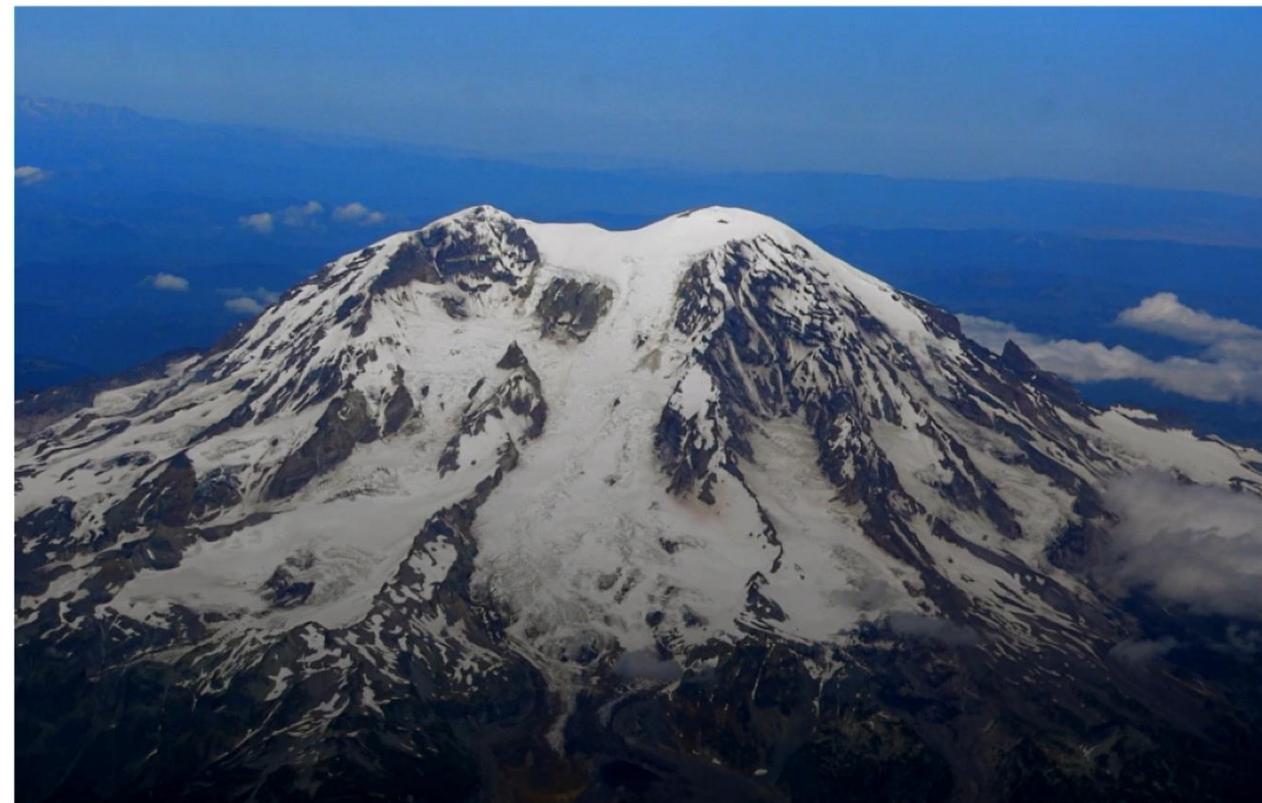


Image Web Part Settings

## ▼ Basic

Image Source

 https://wexdev.spoppe.com/sites/PublishingSite/Share

Caption Text

 captionText

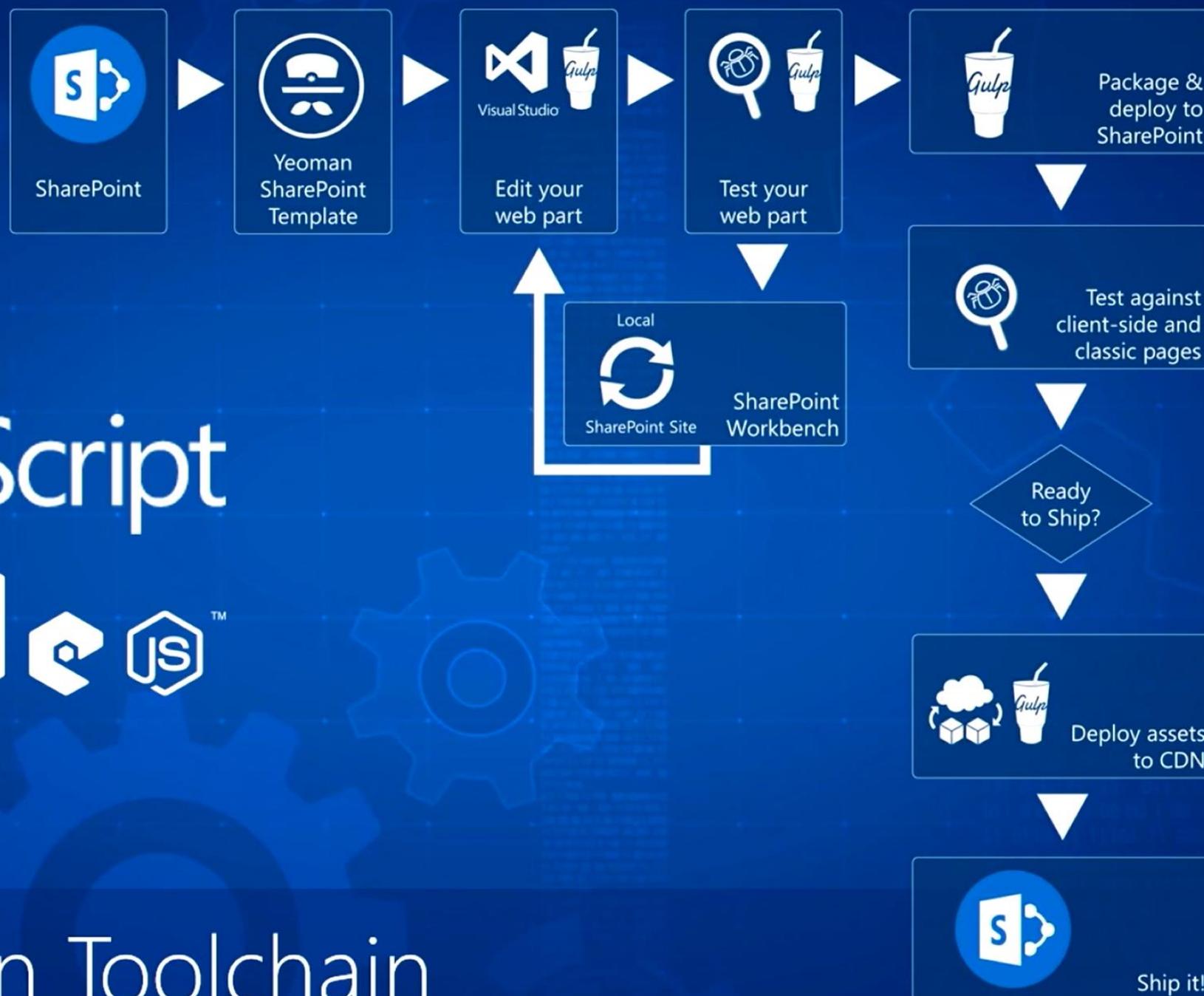
Size Option

 Auto Sizing Auto Sizing Original Sizing

# TypeScript



# Modern Toolchain





EXPLORER

## WORKING FILES

## TEST1

sharepoint

SRC

webparts

test1

dataProvider

images

nls

FileHandler.ts

IImageWebPartProps.ts

Image.less

Image.tsx

ImageSourceType.ts

ImageToolbar.tsx

ImageToolbarButton.tsx

ImageWebPart.ts

ImageWebPart.manifest.json

ImageWebPart.manifest.json.cdn

ImageWebPart.manifest.json.local

LocalDriveFilePicker.less

LocalDriveFilePicker.tsx

## typings

.editorconfig

.gitattributes

.gitignore

.npmignore

.yo-rc.json

gulpfile.js

jsconfig.json

package.json

ImageWebPart.ts src\webparts\test1

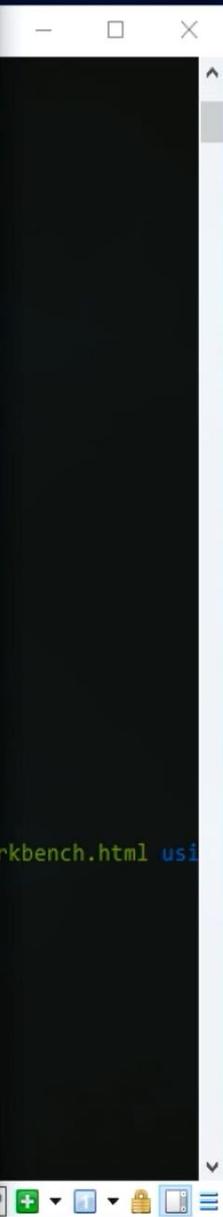
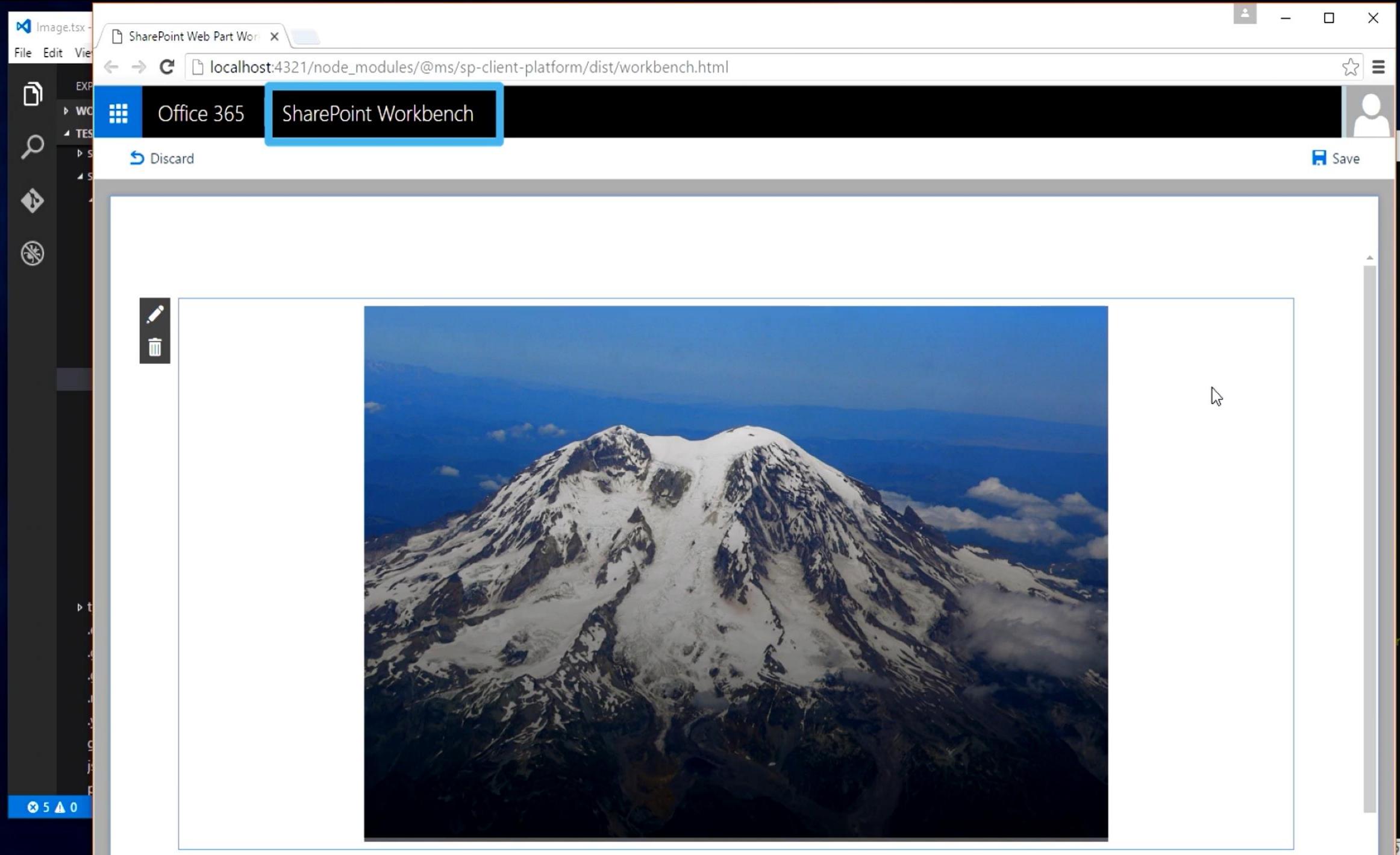
```
66
67     protected get propertyPaneSettings(): IPropertyPanePage[]
68     {
69         return [
70             {
71                 header: {
72                     title: Strings.root.ImageWebPartSettings
73                 },
74                 groups: [
75                     {
76                         groupName: Strings.root.Basic,
77                         groupFields: [
78                             {
79                                 type: IPropertyPaneFieldType.TextBox,
80                                 targetProperty: 'imageSource',
81                                 properties: {
82                                     label: Strings.root.ImageSource
83                                 }
84                             },
85                             {
86                                 type: IPropertyPaneFieldType.TextBox,
87                                 targetProperty: 'captionText',
88                                 properties: {
89                                     label: Strings.root.CaptionText
90                                 }
91                             },
92                             {
93                                 type: IPropertyPaneFieldType.DropDown,
94                                 targetProperty: 'sizeOption',
95                                 properties: {
96                                     label: Strings.root.SizeType,
97                                     options: [
98                                         { key: '0', text: Strings.root.AutoScale },
99                                         { key: '1', text: Strings.root.OriginalSize }
100                                     ] as IDropdownOption[]
101                                 }
102                             }
103                         ]
104                     }
105                 }
106             ]
107         ];
108     }
109 }
```

✖ 3 ▲ 0

Spaces: 4 Ln 89, Col 15 UTF-8 LF TypeScript 1.8.2 😊

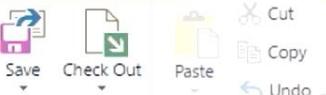
cmd.exe

Search  🔍 ✚ ✖ ✖ ✖ ✖ ✖





BROWSE PAGE FORMAT TEXT INSERT WEB PART



Edit

Clipboard

Body 13px



AaBbCcDdE

AaBb

AaBbCc

AaBbCcDc

AaBbCcDdE

Text Layout

Edit Source Select Convert to XHTML

B

I

U

abc

x<sub>2</sub>x<sup>2</sup>

A

A



Font

Paragraph

Heading 1

Heading 2

Heading 3

Heading 4

Text Layout

Edit Source

Select

Convert to XHTML

Aa

Bb

Cc

Dd

Ee

Font

Get started with your site

Get started with your site

REMOVE THIS



Share your site.



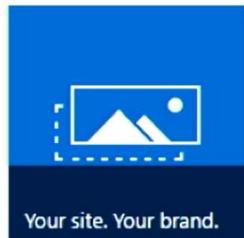
Working on a deadline?



Add lists, libraries, and other apps.



What's your style?



Your site. Your brand.

Site Feed

Image Web Part [3]



Documents

New

Upload

Sync

Share

More

Find a file



✓ Name

Drag files here to upload



Cancel

Save

Image Web Part Settings

Basic

Image Source

Caption Text

Size Option

Auto Sizing

# Flow

SharePoint

Contoso Operations Team Site

New Edit Alert me Export to Excel Add flow

Flow Review My flows Browse Learn Search templates...

When a record is created → Gets a record → Condition

If yes: Create item → Send Email

If no, do nothing

Add a new flow

Start with a template and create automated tasks between your SharePoint data and other apps.

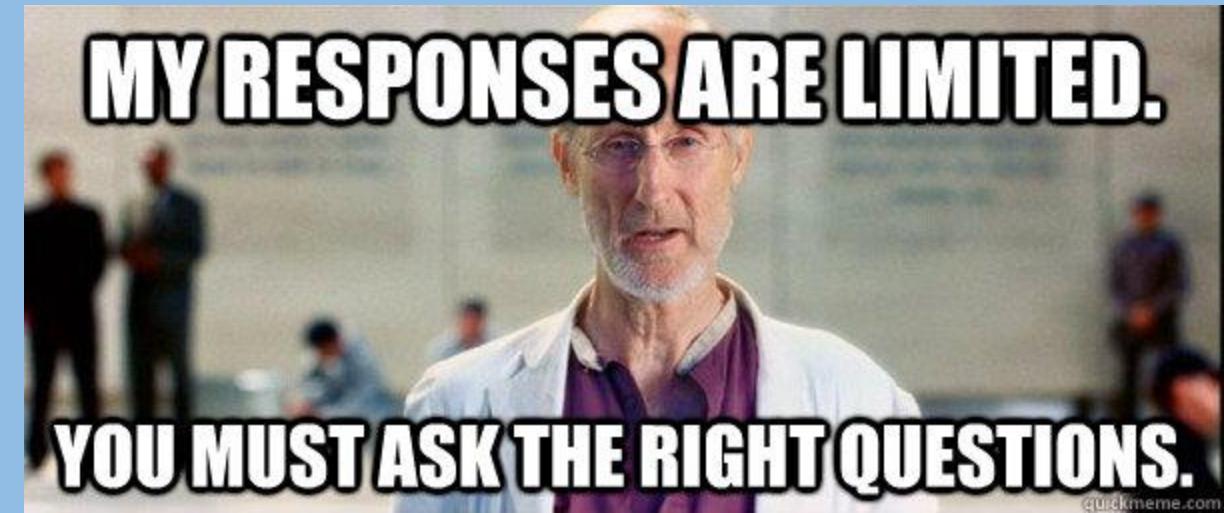
\*This will open the Microsoft Flow site.

- When a new item is added in SharePoint, send a customized email.
- When an object is created in Dynamics CRM, create an item in SharePoint.
- When a new item is added in SharePoint, add a new subscriber to a list in MailChimp.

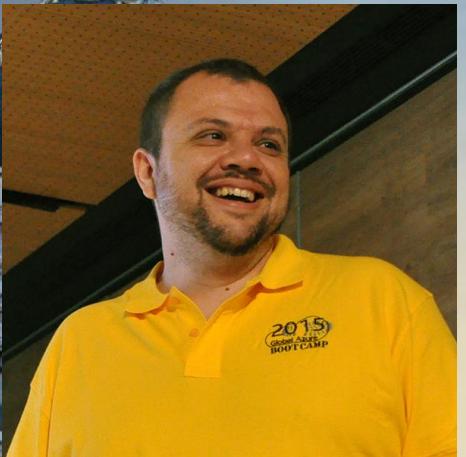
See more templates See your flows

Flow name: Dynamics CRM Order to SharePoint | Update Flow

¿Preguntas?



# Gracias!!!



## Alberto Diaz Martin

Head of Innovation – Microsoft MVP

ENCAMINA

<http://geeks.ms/blogs/adiazmartin>

adiazcan

Geek, Smartphone lover and Developer

**encamina**  
PIENSA EN COLORES

**MVP** Microsoft®  
Most Valuable  
Professional

**Comparti** MOSS

 #spsmad

 SPS  
EVENTS

# Raffle

Please, fill your SPS Madrid passport if you want to participate.

You must get signature from sponsors and complete the poll.

Give us the passport at 6:00 PM in the Auditorium room.

You can win one Sphero BB-8 or a mini drone:



sphero



 SharePoint Saturday  
Madrid  
May, 7th 2016

## Pasaporte / Passport

Si deseas participar en el sorteo final, deberás conseguir la firma de nuestros patrocinadores Gold y Silver en sus stands. Una vez que tengas todas las firmas, rellena tu valoración de las sesiones y entrega esta hoja a las 18:00 en la sala Auditorio.

If you want to participate in the final raffle, you must get the signature of our Gold and Silver sponsors in their stand. Once you have all the signatures, complete the poll about the sessions and give us this sheet at 6:00 PM in the Auditorium room.

 	 	 	 	 	 
--	--	--	--	--	--

My name is: Han Solo My e-mail: han@hotmail.com

Por favor, puntúa las sesiones en el campo gris con números desde 1 (muy mal) a 10 (gran sesión).  
Please, rate sessions in the greyed field with numbers from 1 (too bad) to 10 (great session).

9:30 AM - 10:30 AM	Aplicaciones de Negocio y Movilidad - Lleva tus procesos a tu dispositivo móvil en 5 clics	Office365 Administration with PowerShell and PnP Features	Un SharePoint en la mochila	Next Generation Sync Client – The last chance for Microsoft	
10:30 AM - 11:30 AM	Grupos de Office 365 & Planner: Colaboración y productividad empresarial end-to-end		A Deep Dive into SharePoint 2016 architecture and deployment	Working with a Supermodel for SharePoint Add-ins	'Unmanaged' Knowledge Management: The future of Intranets
11:30 AM - 12:30 AM	Skype for Business Cloud PBX		Click here for Disaster! Configuring SharePoint standby farms	Desarrollando Add-Ins con Angular 2	Remote provisioning con PnP Framework
12:30 PM - 1:30 PM	Getting SQL Spinning with Exchange		Going hybrid with Exchange	Introduction to Azure Machine Learning	Modern Branding on

## Gold sponsors



東京' TOKIOTA



## Silver sponsors



## Bronze sponsors



Share<sup>g</sup>ate

## Collaborate

