



# AWESOME ANGULAR ON DNN AND 2SXC





You can get an awesome, best-practice  
Angular-on-DNN dev-setup in minutes!

Goals of this session

# What this session is about

## What is...

- SPA
- Angular & alternatives

## Why integrate in DNN

- Eye-Candy and great UX
- Business applications
- Custom data management UIs

## Core Challenges

- Integrate into a DNN-Page
- Fast / efficient development
- Runtime environment during dev
- Show to customer without breaking live
- DNN Headers for API calls
- Access real APIs despite CORS



# What would be awesome?



- Fast & Efficient
  - Code locally
  - Hot-Reload development
- Realistic
  - Dev code running in the real DNN site
  - Using data from the live environment
- Multi-Edition
  - Super-user sees all editions incl dev/local
  - Customer sees live/staging





# Live Demo: Template SPA as End-User





# Live Demo: Template SPA as Super-User



# Live Demo: Hot Reload Development in DNN



Who is  
talking?



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AND 2SXC



# Daniel Mettler aka iJungleboy



- Born '78 Switzerland
  - Grew up in Indonesia
  - Speak EN, DE, IN
- Started Dev w/12
  - First AJAX in '98
- Founded 2sic in '99
  - DNN since '03
  - SharePoint since '05
- 2sxc since 2012
- DNN MVP since ca. 2015





gründete 1999 die Firma 2sic

der "Guru"

Web-Leiter und  
Prozess-Spezialist

der "Prozessor"

die "Shopping-Queen"  
<sup>e-Shops</sup>

die Webdesigner

"Schöpfer"

Projektleiter und  
Fachchinesisch-  
Übersetzer

die "Diplomaten"



der "Nerds"  
Software-App-Entwickler

der  
"Kundenflüsterer"

Online Marketing,  
Website-Inhalte

die "Betriebskommission"

Grafiker

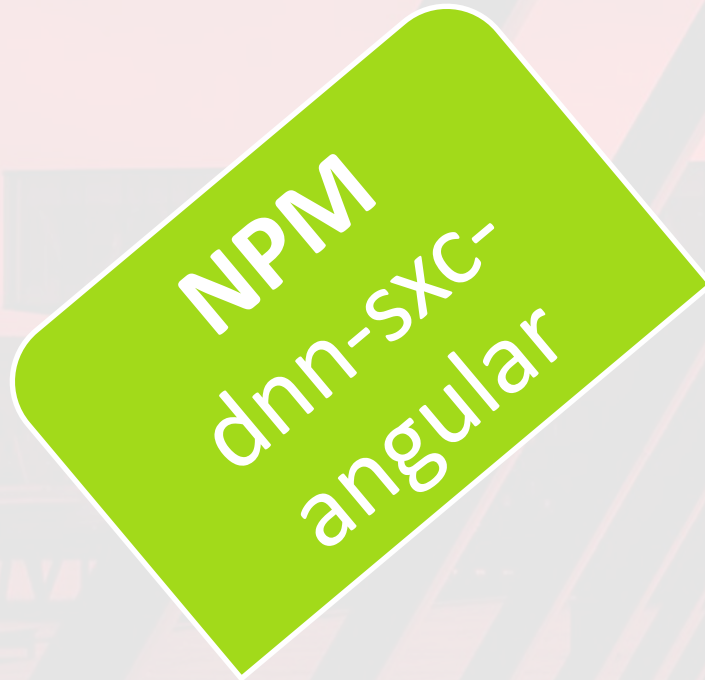
der "Creators"

SharePoint

IT-Hosting-Team

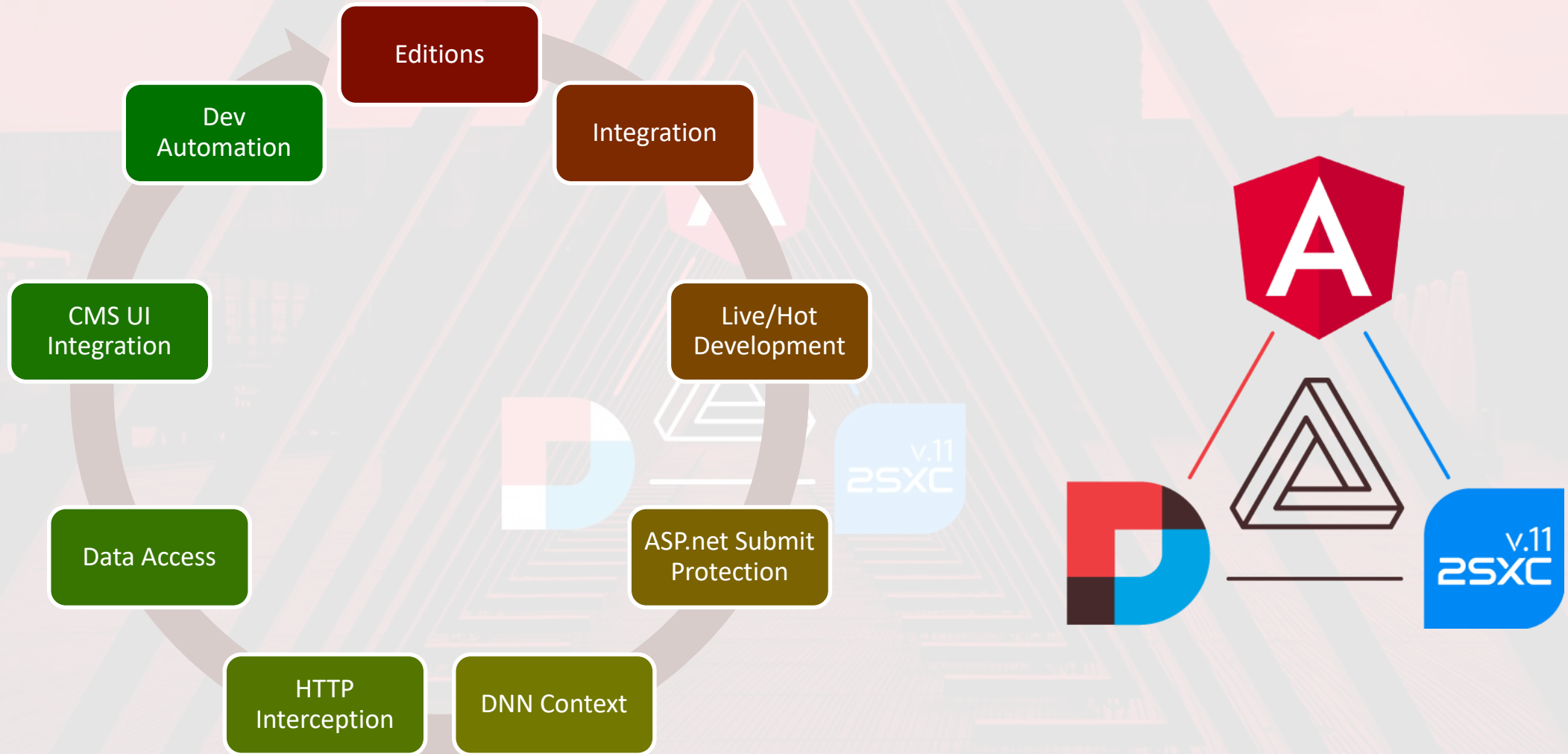


# Building Blocks





# Features of dnn-sxc-angular





Integrate  
in DNN



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# Let's Code: CSHTML integration

(part of the template App)



# Things the Integration CSHTML does



## What it does

1. Handles multiple editions (live, staging, local)
2. Edition-Selection for advanced users
3. Auto-load the generated production parts (live/staging)
4. Auto-load the ng-serve local parts enabling hot-reload

## Allows

- Add-to-Page for production
- Ensures page context is ready for use in Angular (module, rvt, ...)
- Identical integration for development
- Different editions for each target group
- Hot-Reloading during development

→ Fully configurable, great defaults



Integrate  
in Angular



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# Let's Code: Angular Integration



# What DnnAppComponent does

- Picks up the page/module context
- Picks up the RequestVerificationToken
- Initializes the http-interceptor with headers
- Protection from asp.net submit
  - hitting enter in your SPA won't reload the page
- Protection against using incorrectly (singletons, etc.)



# What the invisible Http Interceptor does



## Functions

- Automatically add headers to all http requests going to the own site
  - ModuleId
  - TabId
  - RequestVerificationToken
  - etc.
- Correct short-api urls for 2sxc APIs
- Handle API editions correctly

## Allows Easy Access to

- Web-API endpoints in DNN – just using normal HttpClient in Angular
- 2sxc Content Data
- 2sxc App Queries
- 2sxc App WebApis





Web APIs  
and Data



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# Let's Code: Data Access



# Data and Api



## Features

- Quick Fire Commands  
→ these get an observable with the desired data
  - `data.content$<T> (...)`
  - `data.query$<T> (...)`
  - `data.api$<T> (...)`
- Get objects for re-use
  - `data.content (typeName)`
  - `data.query<T> (queryName)`
- API Calls
  - `api.get<T> (...)`
  - `api.post<T> (...)`

## Enables

- Quickly get any kind of data
- Easily call WebApis
- Leverage Visual Query
- Easily access external data
  - DB/SQL
  - CSV
  - SharePoint lists / documents
  - Custom DataSources make anything possible
- Custom WebAPIs
  - Multi-Editions – awesome for dev/test
  - Live development without restarting DNN



# Content Management Integration



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# Let's Code: CMS Toolbars

Default and custom configurations



# CMS Toolbars with ContentManagerModule

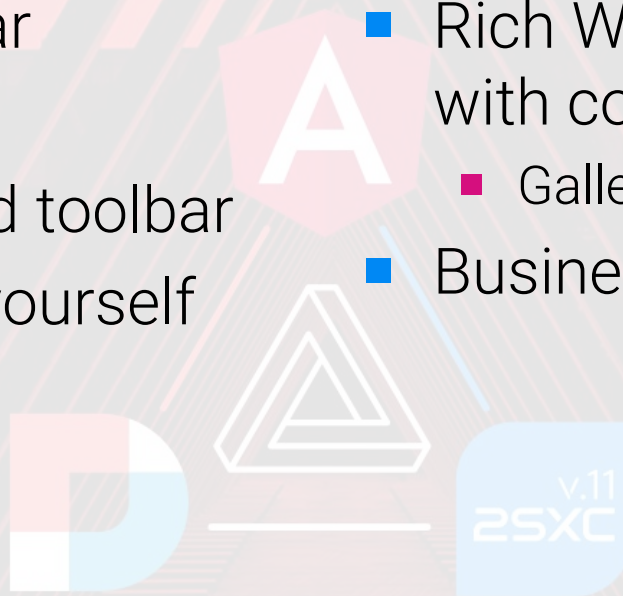


## What's inside

- Simple attribute sxc-toolbar
- Simple tag <sxc-toolbar>
- All features of the standard toolbar
- Optionally handle refresh yourself

## Enables Zero-Effort...

- Rich Web-Content Angular Apps with content editing
  - Galleries & Swipers
- Business Apps with simple data





Dev  
Automation



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- Local operations
- Deploy changes in API code
- Deploy to staging or live





# Finalizing



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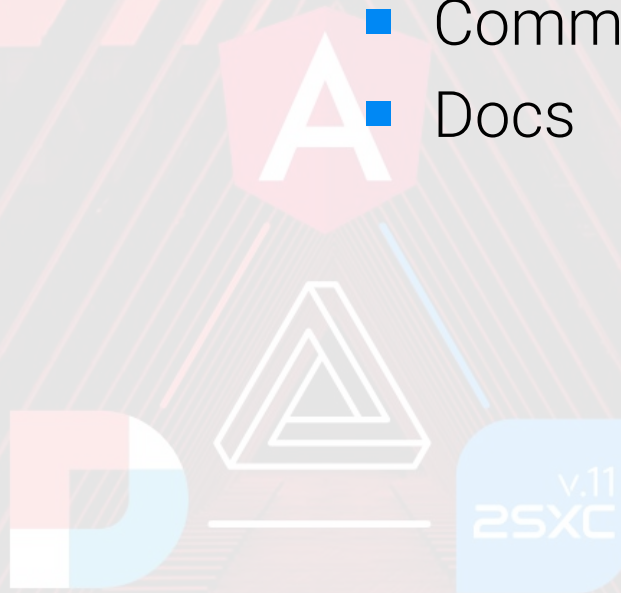
# Next on the Agenda



- Questions
- Getting Started
- Links

## What's next

- Community feedback & Kaizen
- Docs





# Getting Started



- Discover the Template App
- Create your own by...
  - Use the template app and remove the examples module
  - Start afresh / extend existing
    - Create your razor to load the app (inspired by the template)
    - Add @2sic.com/dnn-sxc-angular
    - Setup the app.module
    - Change the AppComponent to extends DnnAppComponent



# Links



- NPM (from here you'll also get to Github)
  - <https://www.npmjs.com/package/@2sic.com/2sxc-typings>
  - <https://www.npmjs.com/package/@2sic.com/dnn-sxc-angular>
- 2sxc
  - <https://2sxc.org/>
  - <https://2sxc.org/dnn-tutorials/>
  - <https://github.com/2sic/app-template-angular>