The future of Mobile Apps is Offline-First

Danny Roest / Product Manager / Mendix
Marcel Groeneweg / Mendix Expert / ITvisors
Agenda

1. Offline first apps: Why, how?
2. Mendix 8: What’s new?
3. ITvisors: Demo & shared experiences
How would you feel if your insurance app would not work?
Users should be able to do their work, regardless of the connection.
How does Mendix support this?

Consistency checks
UI & App logic on device
Data synchronization
The future: Offline first-apps
Offline first architecture

Approach
- Pages & logic interact with local database
- Synchronize data with server when needed

Benefits
- UX / Performance
- Reliability
- Reduced battery drainage
<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
<th>Mendix Version</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Automatic</strong></td>
<td>Modeler analyses model what to sync; Developer does not have to worry about it</td>
<td>Mendix 7</td>
</tr>
<tr>
<td><strong>Configurable</strong></td>
<td>Per entity determine the constraints; Developer can constrain data via xpath expressions; Examples: based on location, only data that is needed today</td>
<td>Mendix 8 Beta</td>
</tr>
<tr>
<td><strong>Full control</strong></td>
<td>Visual what needs to be synchronized by leveraging microflows; Full control on what and when to sync, while keeping it simple; Examples: get first articles, get orders from external system (e.g. SAP)</td>
<td>Mendix 8 GA</td>
</tr>
<tr>
<td><strong>Extensible</strong></td>
<td>Developers can build activities that sync data with (Mendix) REST end points; Full control on what, when, and how to sync; Example: fetch data from other Mendix app or external system</td>
<td>Mendix 8 GA</td>
</tr>
</tbody>
</table>
Configurable Sync
Pluggable nanoflow actions

JavaScript actions
“With great power comes great responsibility”
Other “offline” features in Mendix 8

Xpath support

List operations and list aggregation

Subnanoflows MX 8 GA
Customer case

- Fully offline
- Dynamic forms
- 3rd Party fingerprint integration
- On device PDF generation
Demo

**App demo**
- Business process using Flexible forms

**Under the hood**
- Approach for offline and online data
- Offline data querying
- Decoupling reusable module
Offline do’s and don’ts

Do’s
• Updating data offline requires a clean business process!
• Double check your entity access
• Create a sync debug page
• Put an icon on entities used offline.

Don’ts
• Don’t rename a module or entity used offline!
Go make it offline!
Thank you! Questions?