

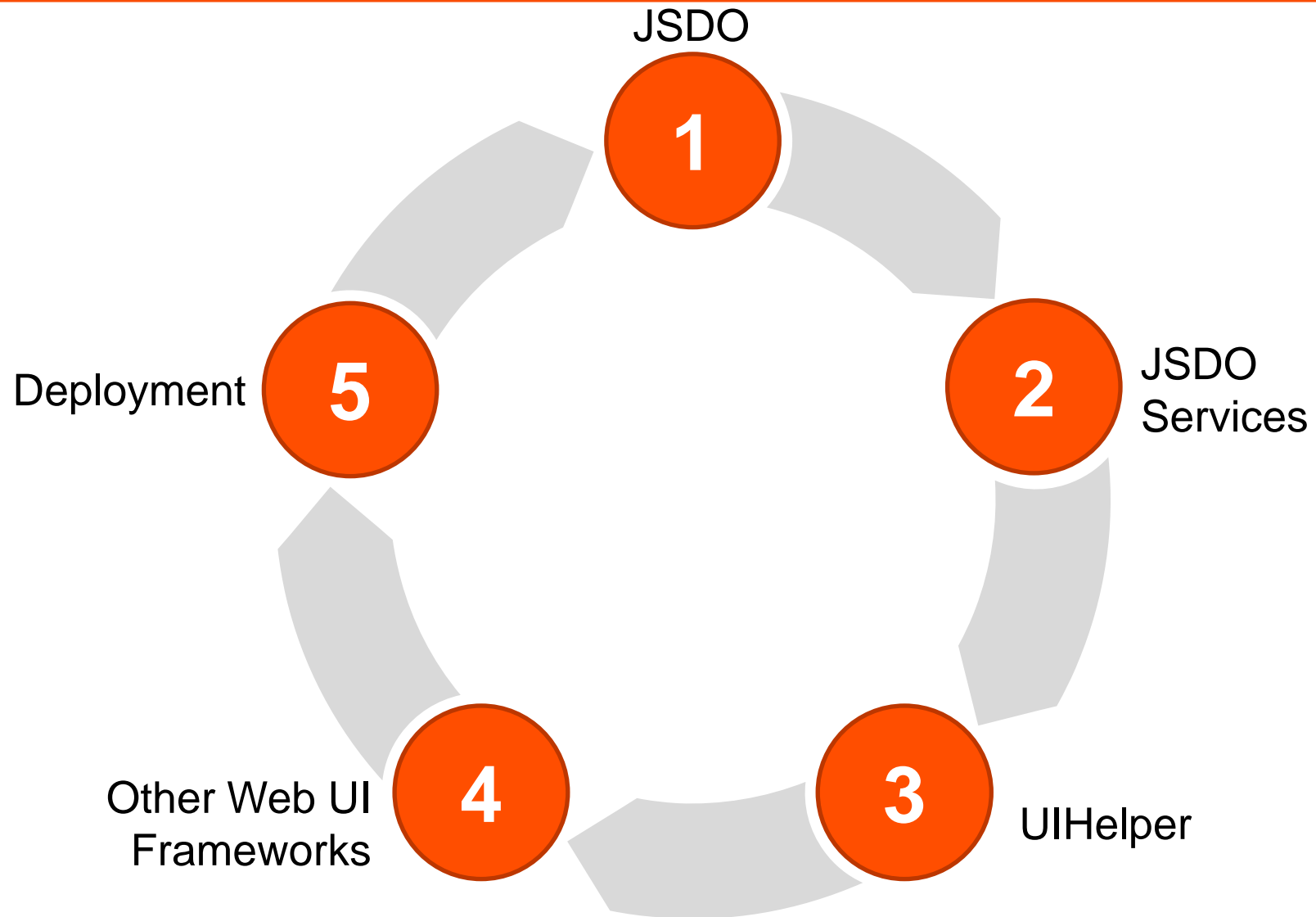
# Inside Progress OpenEdge Mobile!

Edsel Garcia  
OpenEdge Development

**PROGRESS**  
**EXCHANGE** 2013  
DISCOVER. DEVELOP. DELIVER.

# Progress OpenEdge Mobile

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# Progress OpenEdge Mobile

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JSDO

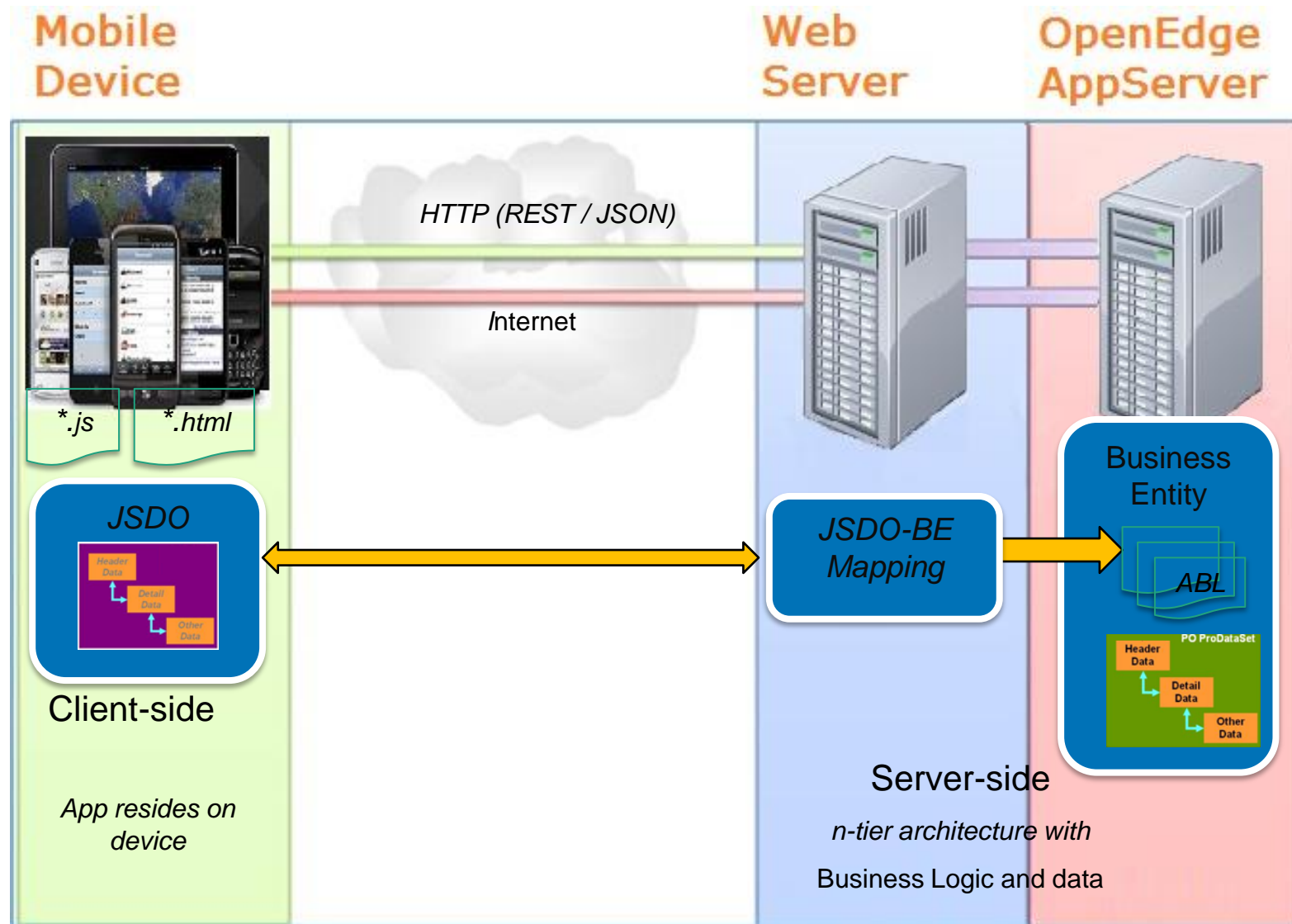


# JSDO – Progress JavaScript Data Object

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- Access to OpenEdge Database
- Access to the OpenEdge AppServer
- XMLHttpRequest
- ProDataSet
- CRUD + Invoke

# Runtime Architecture for OpenEdge Mobile



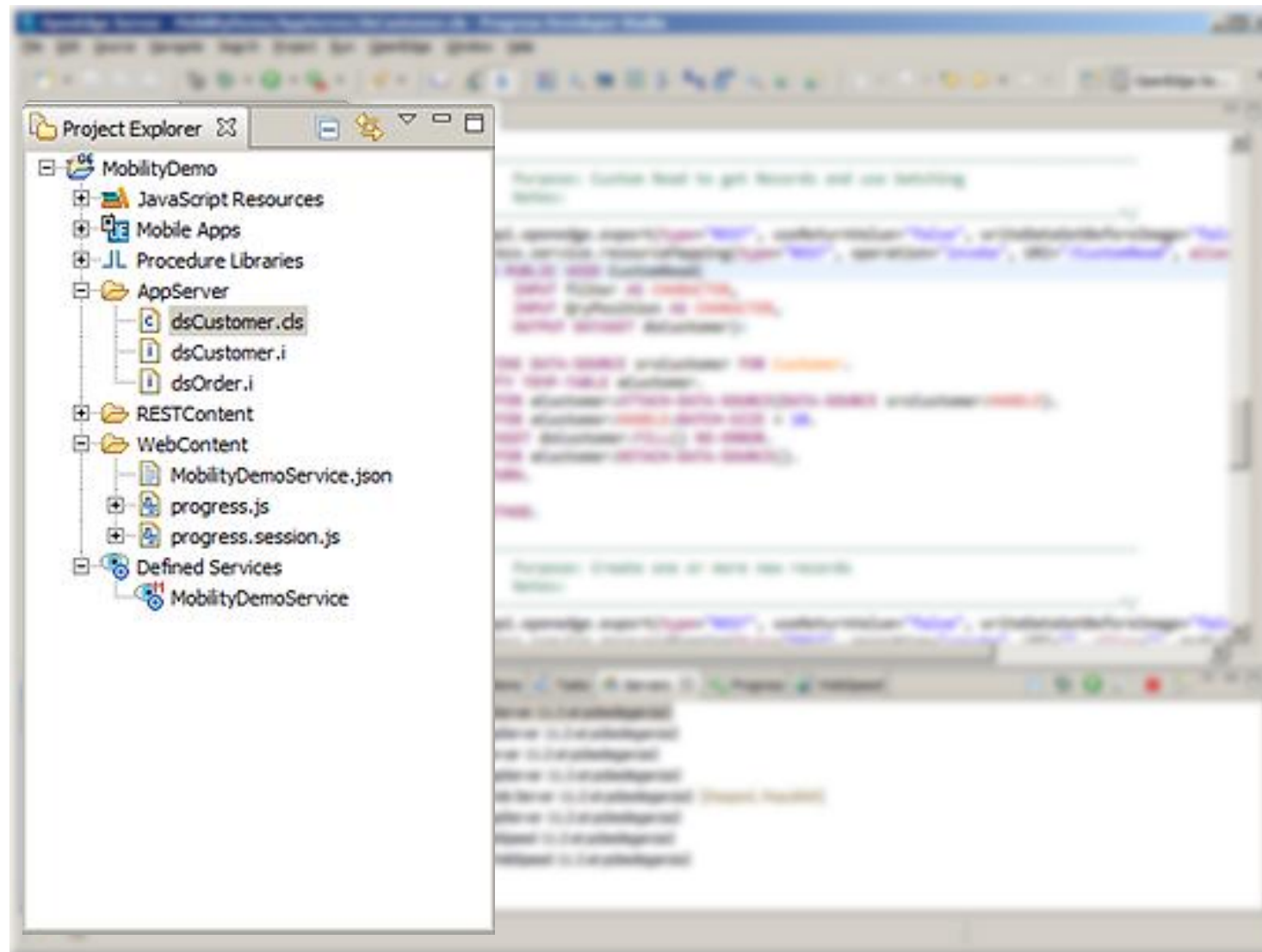
# Business Entity

The screenshot displays the Progress Developer Studio interface. The main window shows the source code for `dsCustomer.cls`. The code includes a comment block with the purpose and notes for the `CustomRead` method, followed by the method definition and implementation.

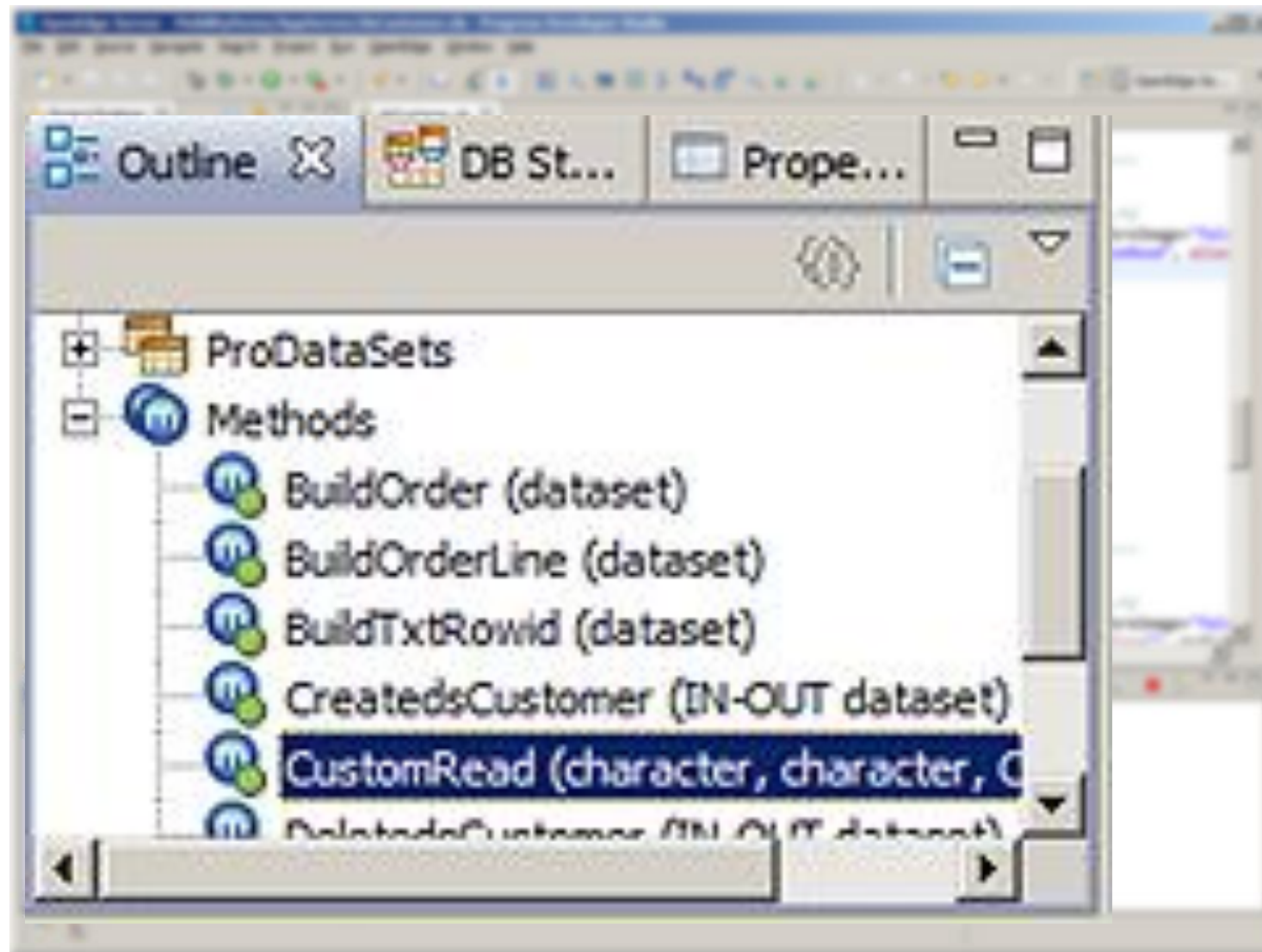
```
97
98
99      Purpose: Custom Read to get Records and use batching
100     Notes:
101
102     /*-----*/
103     @openapi.openedge.export(type="REST", useReturnValue="false", writeDataSetBeforeImage="false",
104     @progress.service.resourceMapping(type="REST", operation="invoke", URI="/CustomRead", alias="dsCustomer")
105     METHOD PUBLIC VOID CustomRead(
106         INPUT filter AS CHARACTER,
107         INPUT QryPosition AS CHARACTER,
108         OUTPUT DATASET dsCustomer):
109
110         DEFINE DATA-SOURCE srcCustomer FOR Customer.
111         EMPTY TEMP-TABLE eCustomer.
112         BUFFER eCustomer:ATTACH-DATA-SOURCE(DATA-SOURCE srcCustomer:HANDLE).
113         BUFFER eCustomer:HANDLE: BATCH-SIZE = 10.
114         DATASET dsCustomer:FILL() NO-ERROR.
115         BUFFER eCustomer:DETACH-DATA-SOURCE().
116         RETURN.
117
118     END METHOD.
119
120     /*-----*/
121     Purpose: Create one or more new records
122     Notes:
123     /*-----*/
124     @openapi.openedge.export(type="REST", useReturnValue="false", writeDataSetBeforeImage="false",
125     @progress.service.resourceMapping(type="REST", operation="create", URI="/", alias="dsCustomer")
```

The Project Explorer on the left shows the project structure, including `dsCustomer.i` and `dsOrder.i`. The Outline window at the bottom left shows the `ProDataSets` and `Methods` sections, with `CustomRead (character, character, C` selected. The Console window at the bottom right shows the status of various services, including `restmgr1 OE Web Server 11.2 at pcedegarcia2 [Stopped, Republish]`.

# Business Entity



# Business Entity

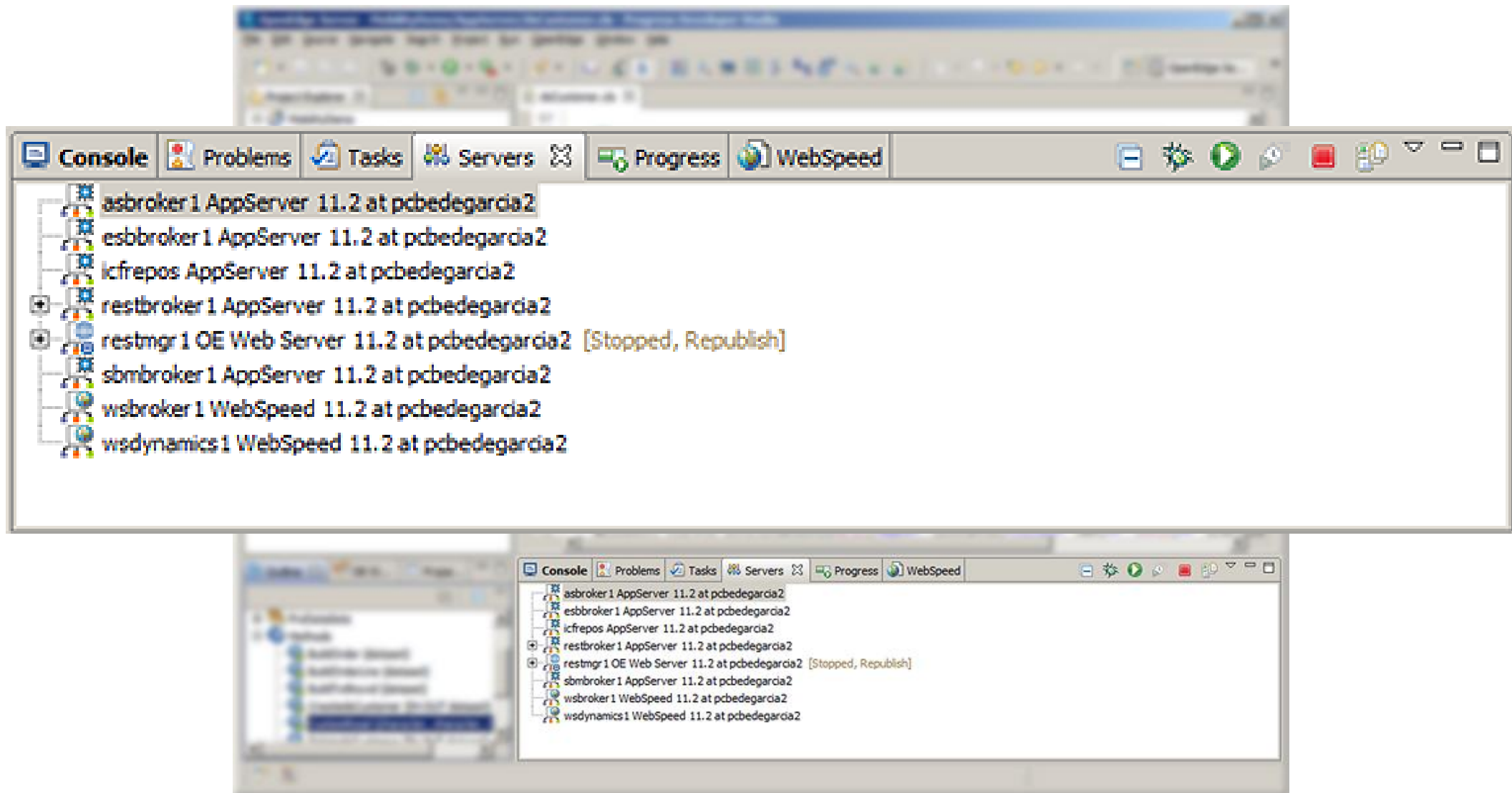




# Business Entity

```
dsCustomer.ds
97
98  /*-----
99      Purpose: Custom Read to get Records and use batching
100     Notes:
101     -----*/
102  @openapi.openedge.export(type="REST", useReturnValue="false", writeDataSetBeforeImage="false",
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124  @progress.service.resourceMapping(type="REST", operation="create", URI="/", alias="", alias="")
```

# Business Entity



# JSDO Catalog



```
1 {
2   "version": "1.0",
3   "lastModified": "Tue Mar 05 16:01:57 EST 2013",
4   "services": [{
5     "name": "MobilityDemoService",
6     "address": "\/rest\/MobilityDemoService",
7     "useRequest": true,
8     "resources": [{
9       "name": "dsCustomer",
10      "path": "\/dsCustomer",
11      "schema": {
12        "type": "object",
13        "additionalProperties": false,
14        "properties": {"dsCustomer": {
15          "type": "object",
16          "additionalProperties": false,
17          "properties": {"eCustomer": {
18            "type": "array",
19            "items": {
20              "additionalProperties": false,
21              "properties": {
22                "id": {"type": "string"},
23                "CustNum": {
24                  "type": "integer",
25                  "default": 0,
26                  "title": ""
27                },
28                "title": ""
29              }
30            }
31          }
32        }
33      }
34    }
35  ]
36 }
37 }
```

# JSDO – Progress Java Script Data Object

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## ■ CRUD + Invoke

- add() (CREATE)
- fill() (READ)
- assign() (UPDATE)
- remove() (DELETE)
- method() (INVOKE)

## ■ Properties

- autoSort (11.3)
- caseSensitive (11.3)
- name
- record
- useRelationships

## ■ Methods

- addRecords()
- find()
- findById()
- Foreach()
- getData()
- getId()
- getSchema()
- saveChanges()
- sort() (11.3)
- subscribe()
- unsubscribe()

# JSDO – Progress JavaScript Data Object

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- JSDO – progress.js
- Session – progress.session.js
- DLC/mobile/client/js
- Included in Mobile App Builder projects

# JSDO – Using the JSDO

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```
session = new progress.data.Session();  
session.login(<url-to-service>, "", "");  
session.addCatalog(<url-to-jsdo-catalog>);  
  
jsdo = new progress.data.JSDO({ name: 'dsCustomer' });  
jsdo.subscribe('AfterFill', onAfterFillCustomers, this);  
  
jsdo.fill();
```

JSDO



JSDO



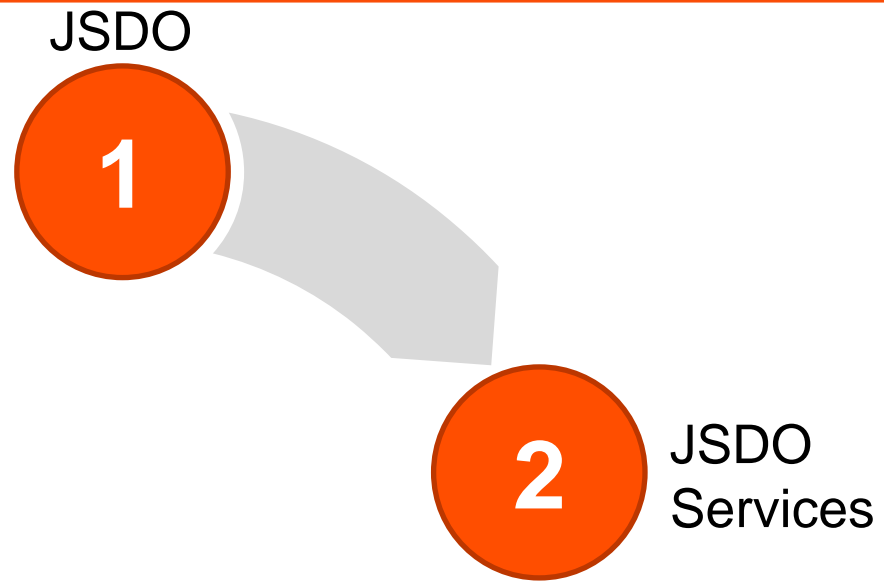
## Benefits

- Leverage Existing Business Logic



# Progress OpenEdge Mobile

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# JSDO Services

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- Access to the JSDO from the Mobile App Builder
- JSDO Catalog
- CRUD:
  - Create
  - Read
  - Update
  - Delete
- Row
- Invoke

JSDO Services



# Progress OpenEdge Mobile

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JSDO

1

**Benefits**

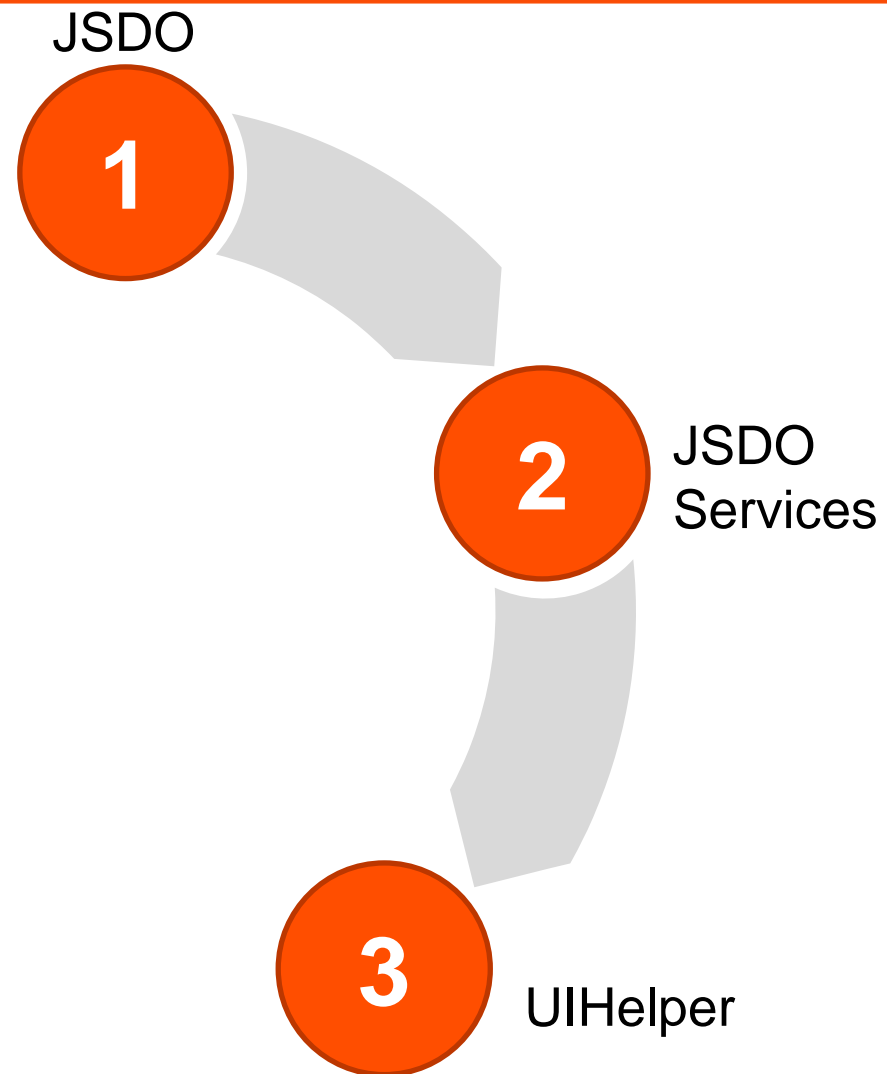
- Leverage Existing Business Logic
- Increase Productivity, Quicker Time to Market

2

JSDO  
Services

# Progress OpenEdge Mobile

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# UIHelper

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- UI based on HTML (listviews built using `<ul>` + `<li>`)
- jQuery Mobile
- jQuery Mobile using the Mobile App Builder
- JavaScript + HTML

# UIHelper – Using the UIHelper

---

```
session = new progress.data.Session();
session.login(<url-to-service>, "", "");
session.addCatalog(<url-to-jsdo-catalog>);

jsdo = new progress.data.JSDO({ name: 'dsCustomer' });
jsdo.subscribe('AfterFill', onAfterFillCustomers, this);

uihelper = new progress.ui.UIHelper({ jsdo: jsdo });
uihelper.setDetailPage({ name: "custdetail" });

uihelper.setListView({ name: 'listview',
    format: '{CustNum}<br>{Name}<br>{State}<br>{Country}',
    autoLink: true
});

jsdo.fill();
```

UIHelper





# Progress OpenEdge Mobile

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JSDO

1

## Benefits

- Leverage Existing Business Logic
- Increase Productivity, Quicker Time to Market
- Dynamic Model

2

JSDO Services

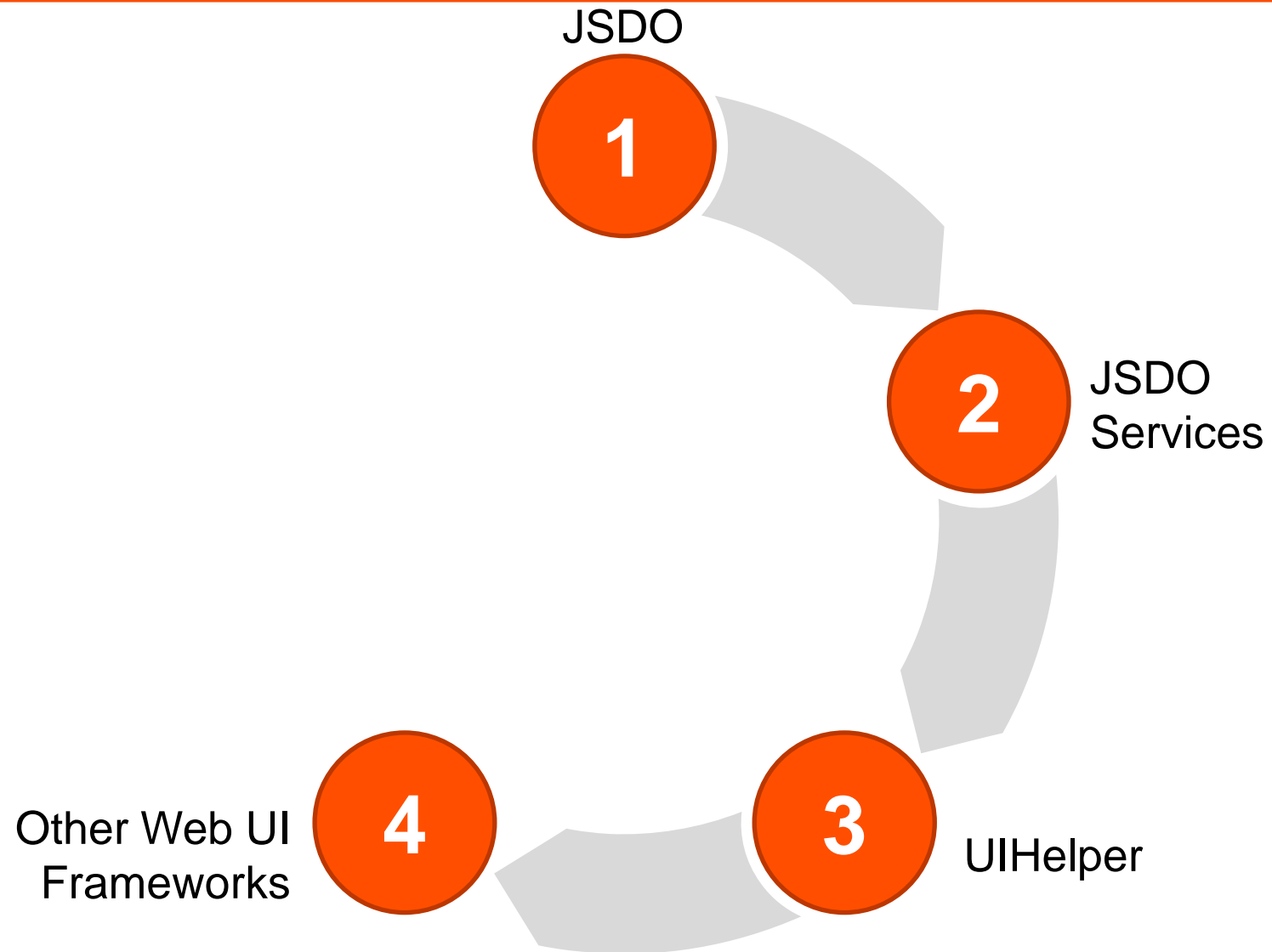
3

UIHelper



# Progress OpenEdge Mobile

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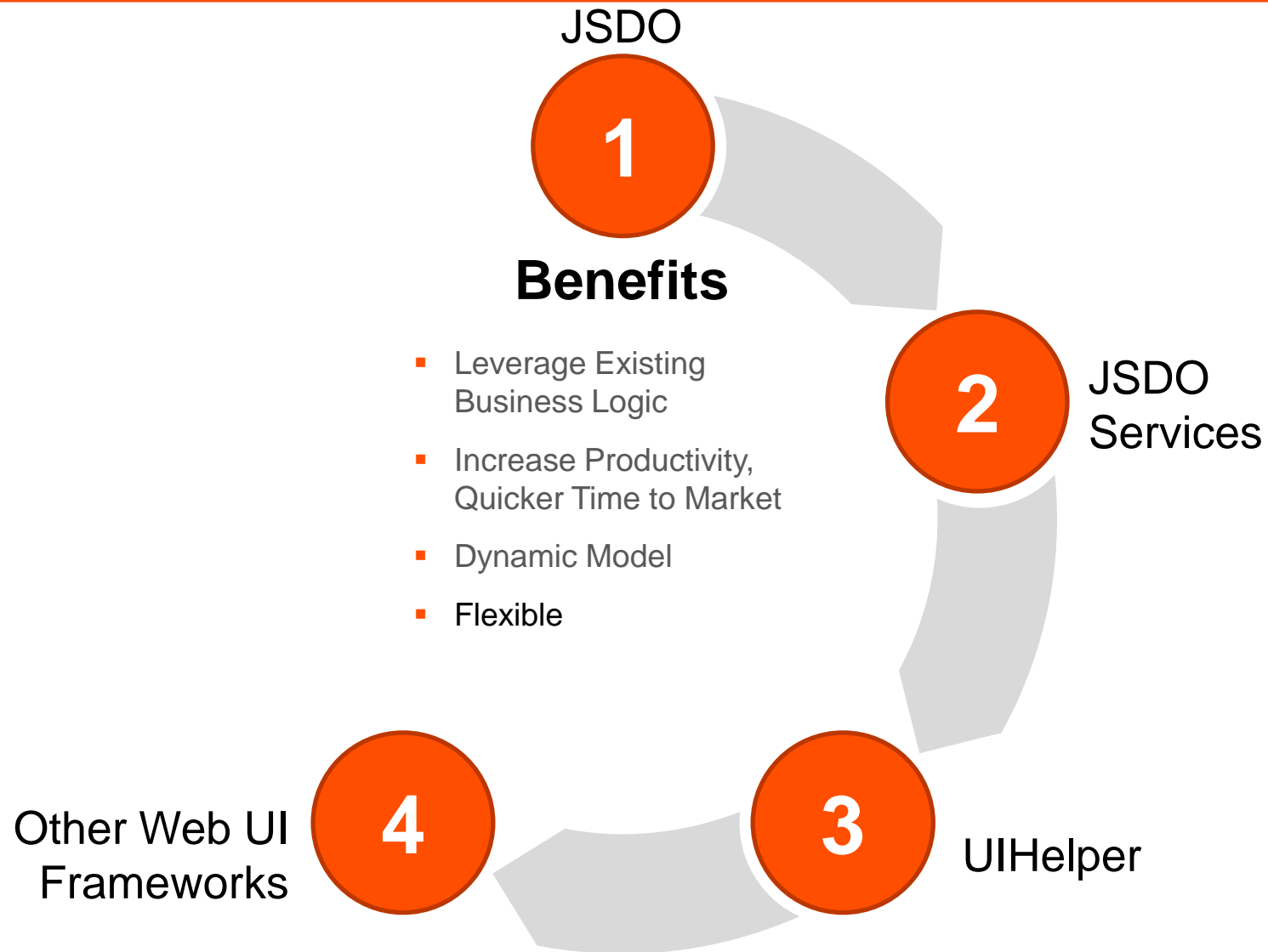
# Other Mobile Web UI Frameworks

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- Web
- Sencha Touch
- Knockout.js
- Qooxdoo
- Dojo Toolkit

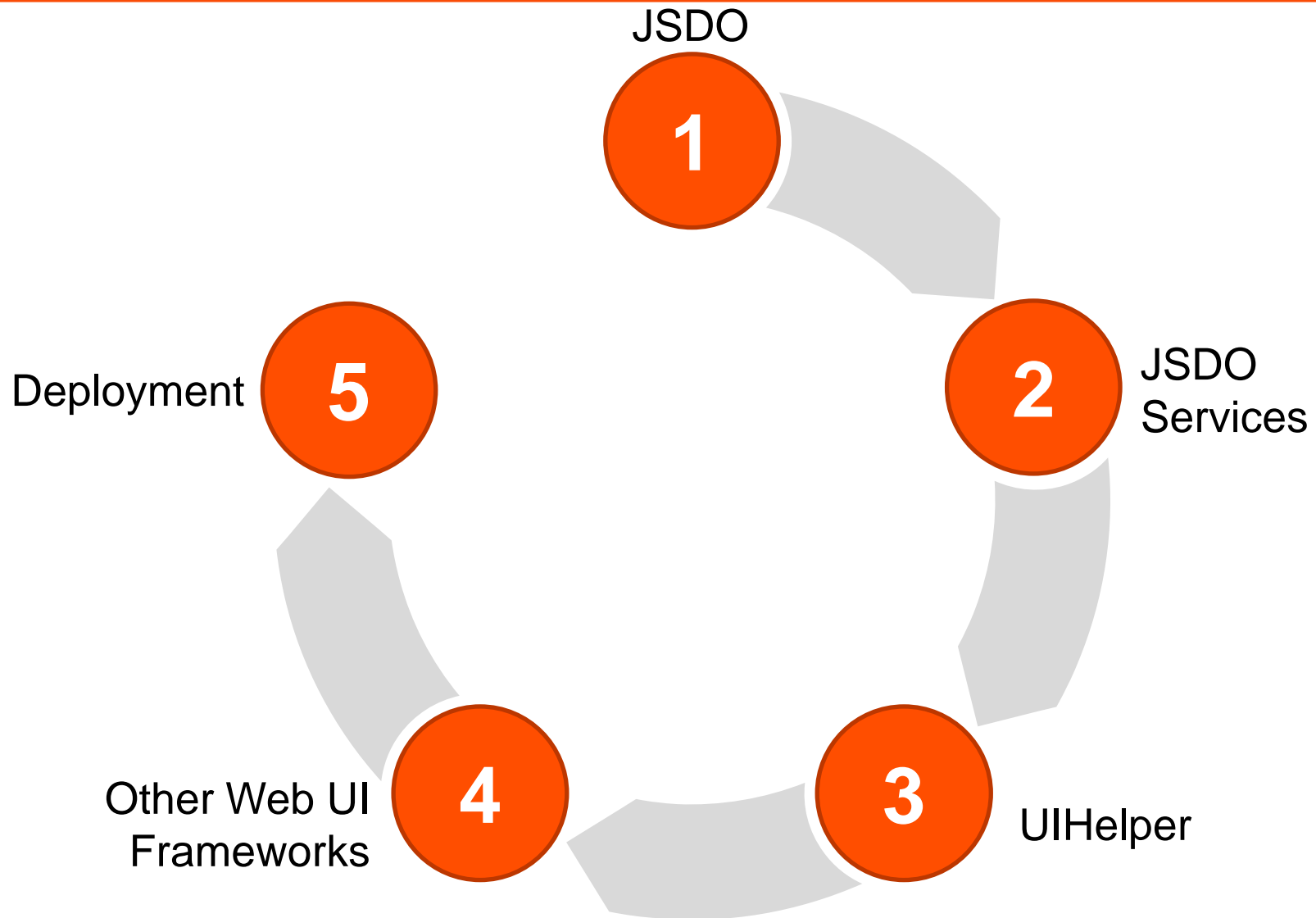
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# Progress OpenEdge Mobile

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# Deployment

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- Build native app for iOS and Android using PhoneGap
- Cloud based build
- Distribution certificate and provisioning profile needed for iOS
- Auto-generated key/certificate for Android
  - Install from Unknown Sources allows install on device
- Install options:
  - Over the Air Install (iOS)
  - iTunes sync (iOS)
  - Download from web site (Android)

Deployment



# Deployment

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Platform	Web resources	Source code	Release binary
	<a href="#">HTMLJS/CSS</a>	<a href="#">Eclipse project</a>	<a href="#">.apk</a>
	<a href="#">HTMLJS/CSS</a>	<a href="#">xCode project</a>	<a href="#">.ipa</a>
Other Platforms	<a href="#">HTMLJS/CSS</a>		
	<a href="#">OpenEdge plug-in</a>		



# Deployment

---

We are working as fast as we can to build your IPA file...

This page will refresh in **8 seconds** automatically.

Refresh manually

[Click Here](#) if you changed your mind and want to cancel this build

# Deployment

---

We are done!

Your application file was built successfully.

Your download will begin shortly.

If it does not start, please [click here](#) to start the download.



[Click Here](#) if you changed your mind and want to cancel this build

# Deployment

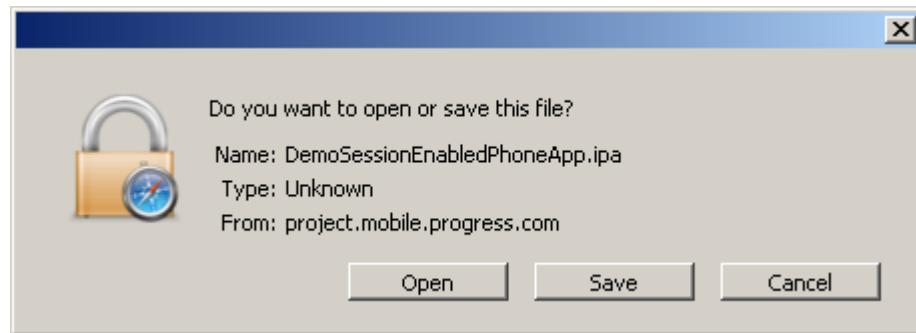
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We are done!

Your application file was built successfully.

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# Deployment

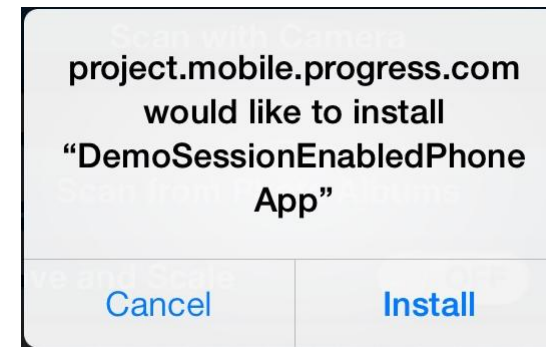
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We are done!

Your application file was built successfully.

Your download will begin shortly.

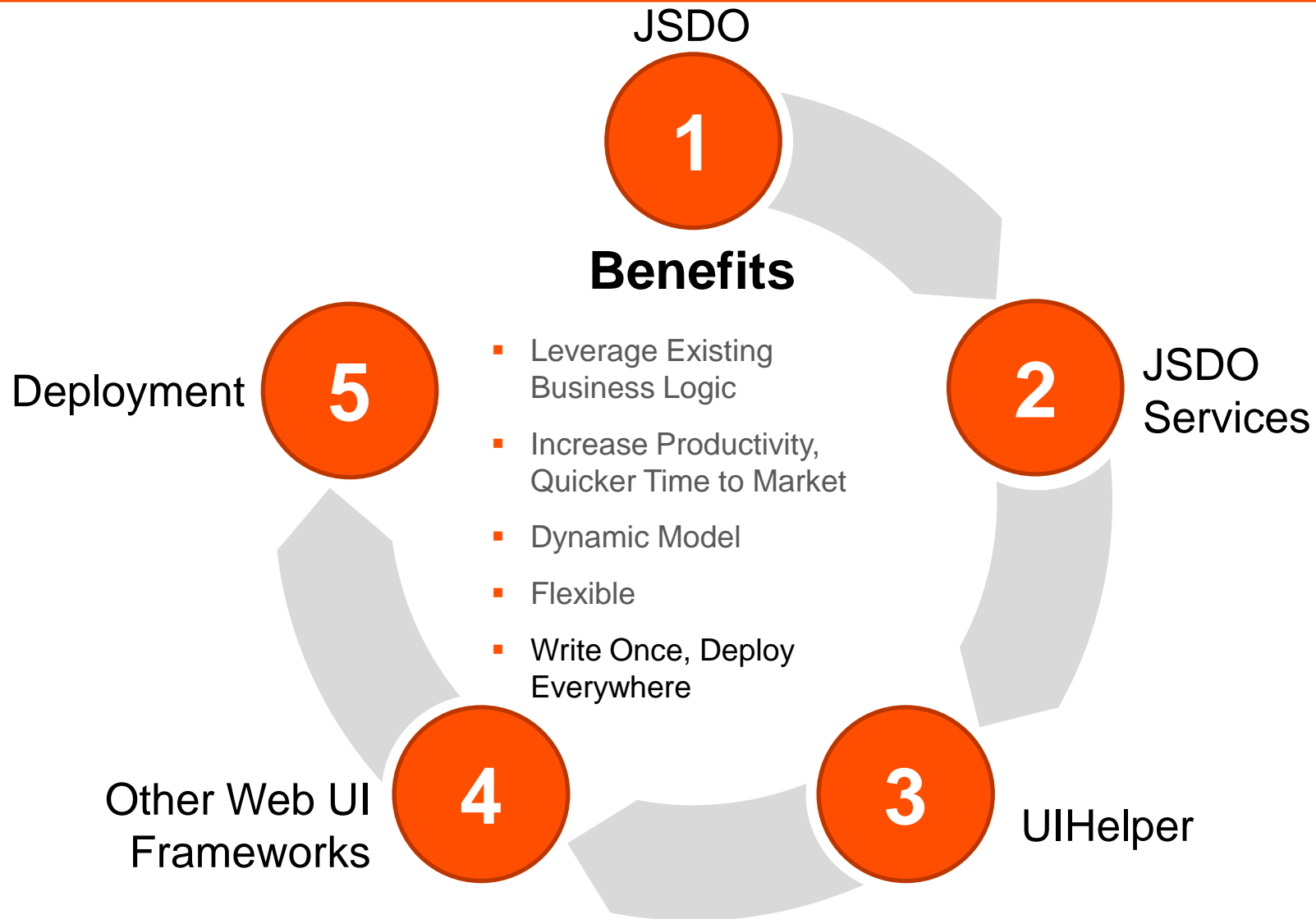
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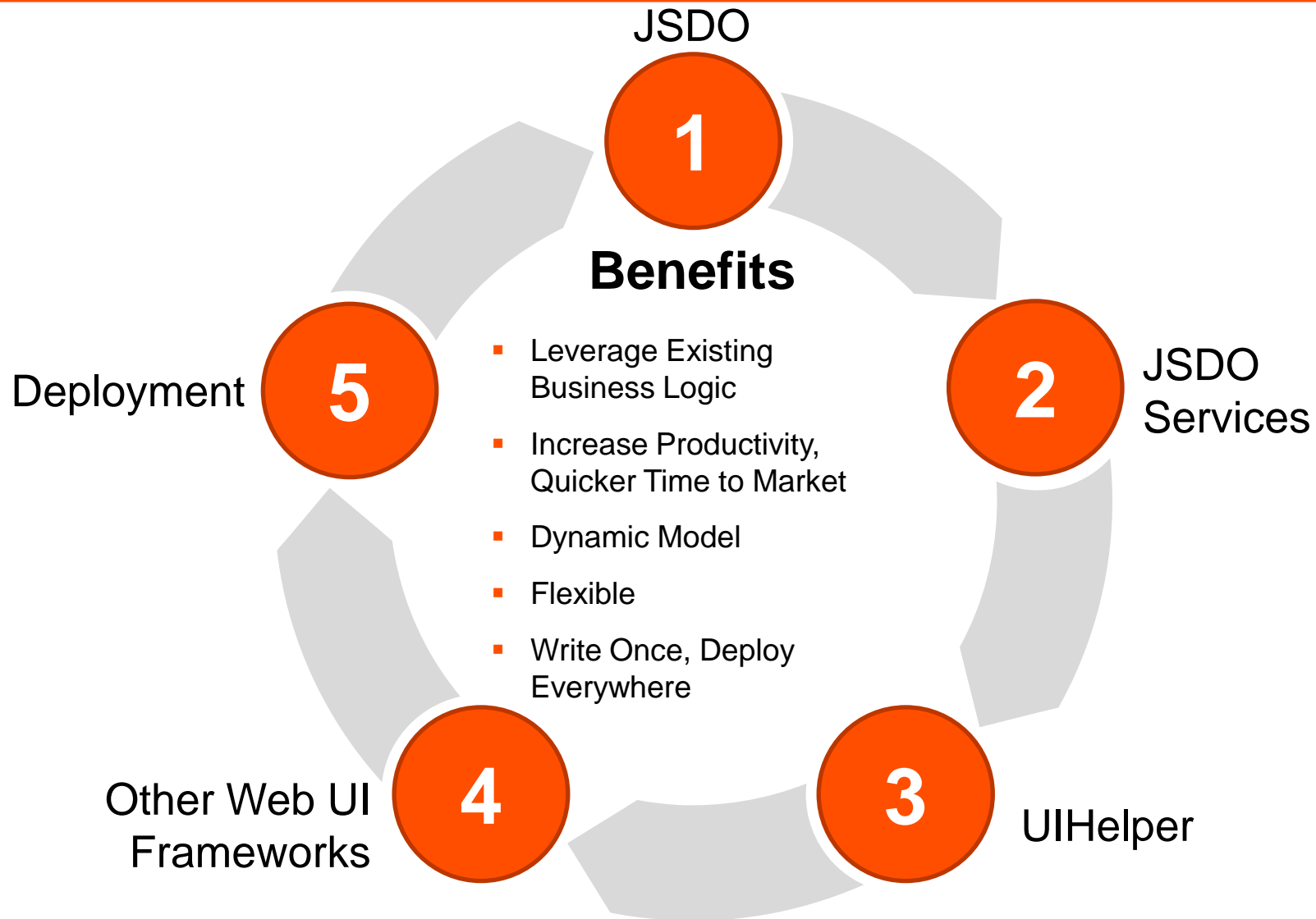
# Progress OpenEdge Mobile

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# Progress OpenEdge Mobile

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# Progress OpenEdge Mobile

Write Once, Run Anywhere Portability with the  
Benefits of Native Applications

The Easiest Way to Build an OpenEdge Application  
Supporting Mobile Devices, End-to-end





**PROGRESS**