



APEX Application Deployment - The Component Approach

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About me



- ▶ Mag. Inf., Faculty of Organization and Informatics in Varaždin, 2008.
- ▶ Worked as a school teacher until 2011.
- ▶ Since 2011. working as an Oracle developer in Bilog d.o.o., with focus on Application Express
- ▶ Also:



THE #1 PROGRAMMER EXCUSE
FOR LEGITIMATELY SLACKING OFF:

"MY CODE'S DEPLOYING."

HEY! GET BACK
TO WORK!

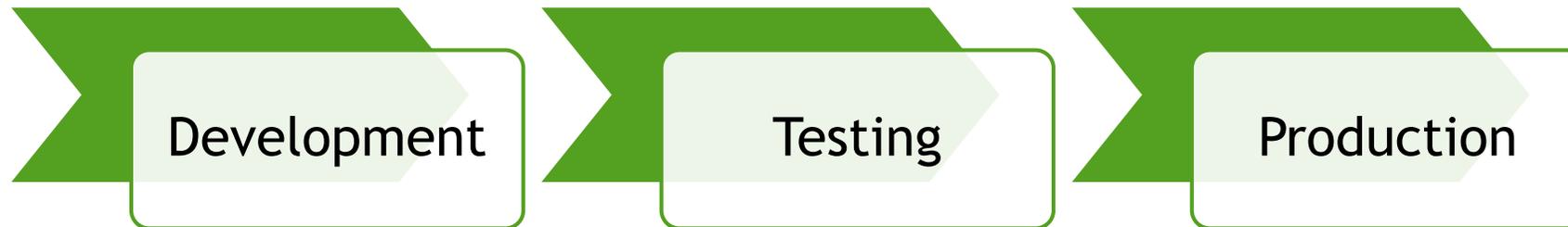
DEPLOYING!

OH. CARRY ON.

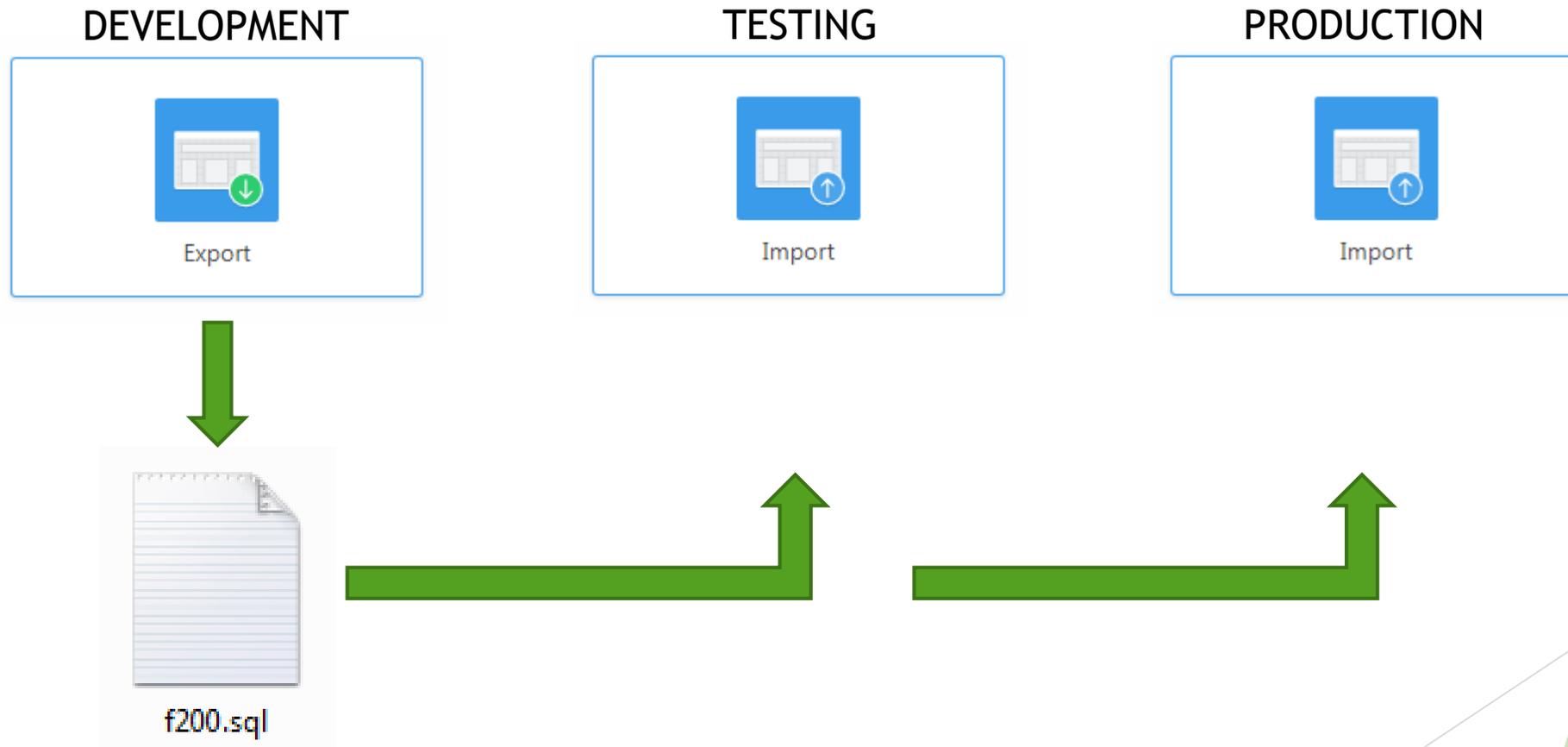


Software Deployment

- ▶ "Software deployment is all of the activities that make a software system available for use.,,
- ▶ Typically:



APEX Application Deployment



What if?

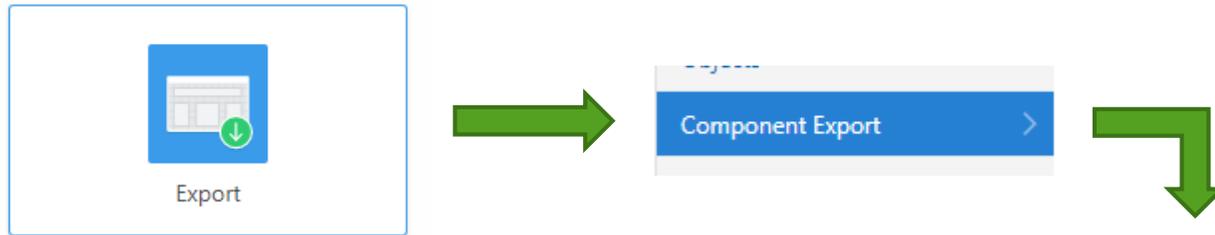
- ▶ Hundreds of pages
- ▶ Tens of plugins and other shared components
- ▶ Tens of concurrent developers
- ▶ Interwoven modules
- ▶ ?

Possibilities

- ▶ Deploy entire app? 
- ▶ Development > replicate changes on test > entire app from test to prod? 
- ▶ Export and deploy only relevant components? 

How to?

► Component export through Application Builder:



Components Components by Page Build Option Status

Find Component Rows

Application Components

<input type="checkbox"/>	Component Type ↑≡	Component Name	Updated	Developer
<input type="checkbox"/>	Authentication Scheme	Application Express Authentication	3 months ago	ADMIN
<input type="checkbox"/>	Breadcrumb	Breadcrumb	10 months ago	-
<input type="checkbox"/>	Breadcrumb Template	Breadcrumb	10 months ago	-
<input type="checkbox"/>	Button Template	Icon	10 months ago	-

How to?

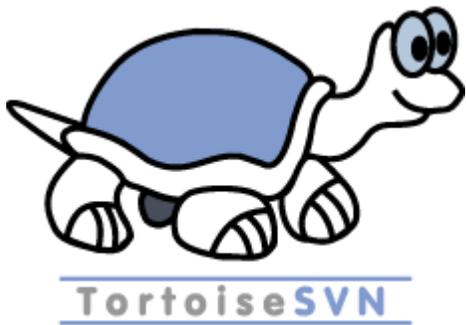
- ▶ Component export through custom API package:
 - ▶ Get content into CLOB or other buffer type
 - ▶ Write SQL file from buffer to local folder

Custom Export API, continued

- ▶ `wwv_flow_utilities.export_workspace_to_clob`
 - ▶ Workspace
- ▶ `apex_050100.wwv_flow_gen_api2.export`
 - ▶ Pages, Application Processes, Application Items, Shared Components etc...

Versioning

- ▶ Organize exported files into folders structured to suit your needs
- ▶ Use your favorite versioning tool



Semi-automatic Deployment?

- ▶ Gather SQL files in a deployment folder
- ▶ Create INSTALL.SQL file
- ▶ Create INSTALL.BAT file
- ▶ Deploy!

INSTALL.BAT

```
@SETLOCAL
```

```
@ECHO APEX application deployment
```

```
@PAUSE
```

```
@SET DB=XE-PRODUCTION
```

```
@SET SCHEMA=hroug
```

```
@SET PWD=123
```

```
sqlplus /nolog @install.sql %DB% %SCHEMA% %PWD%
```

```
@del /F install_xe-prod.log
```

```
@ren install.log install_xe-prod.log
```

```
@attrib +R install_xe-prod.log
```

```
@ENDLOCAL
```

```
@PAUSE
```

INSTALL.SQL

```
set verify off
set document off
set scan on

define db_name = &1
define schema_name = &2
define schema_pwd = &3

whenever sqlerror continue
spool install.log

-----

-- Connect as &schema_name:
prompt connecting as &schema_name ...
set scan on
connect &schema_name/&schema_pwd@&db_name
set scan off
set serveroutput on size 1000000
```

```
-----
pro Installing Scripts ...
```

```
pro ws12474750678642378.sql
```

```
@@ ws12474750678642378.sql
```

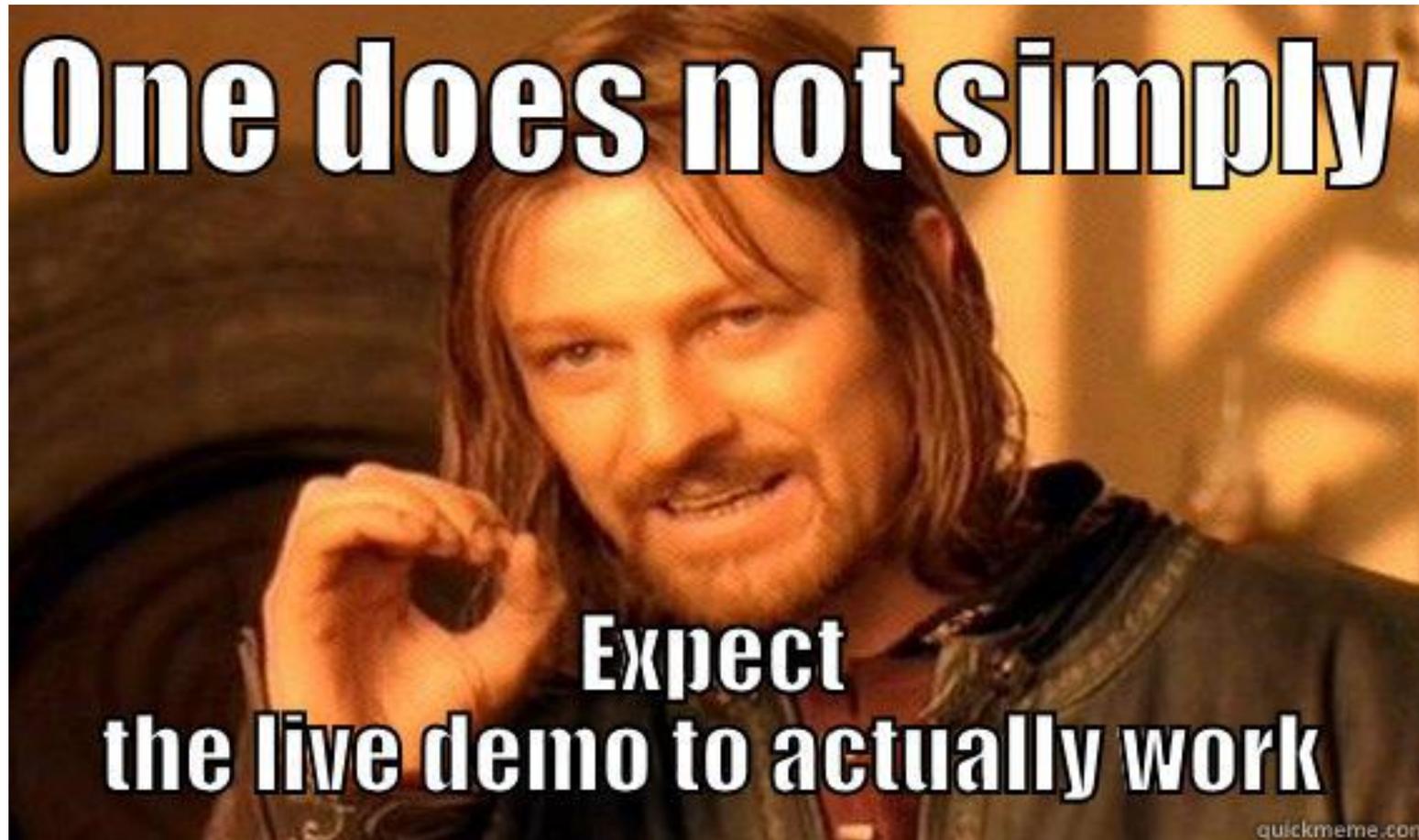
```
pro f120.sql
```

```
@@ f120.sql
```

```
spool off
```

```
exit
```

Live Demo



And when you finally succeed...



The point?

- ▶ Explore Apex Views/Tables
- ▶ Explore Apex API-s
- ▶ Automate your routine processes

References

- ▶ Thanks to **Allianz Zagreb** for their kind permission to present deployment concepts developed by their Apex Team!
- ▶ „It’s compiling” comic
<https://xkcd.com/303/>
- ▶ „Live Demo” meme
<http://www.quickmeme.com/p/3vngix>
- ▶ „Perfect Tree Fall”
<https://imgur.com/gallery/8eZVpGa>
- ▶ „Workspace, Application and Page Exporting in PL/SQL”
<https://apexplained.wordpress.com/2012/03/20/workspace-application-and-page-export-in-plsql>
- ▶ „Oracle APEX Deployments: You’re Doing It Wrong”
<https://www.insum.ca/oracle-apex-deployments-youre-doing-it-wrong/>



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**THANK YOU
FOR YOUR
ATTENTION**

