# SIG Talk: Quality & Testing - Tips & Tricks

March 13, 2018

**Today's Speakers:**

Bob Crews
Vivit Florida User Group Leader
President
Checkpoint Technologies

Carsten Neise
Senior IT Quality Consultant
profi.com AG Business Solutions
Germany Chapter Leader

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**Webinar to begin shortly**

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# SIG Talk: Quality & Testing - Tips & Tricks

**March 13, 2018**

# Welcome to

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# Hosted By

Chris Trimper
Enterprise QA Senior Automation Analyst
Independent Health

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# Webinar Housekeeping

- This "LIVE" session is being recorded
- Recordings are available to all Vivit members
- To enlarge the presentation screen, click on the rectangle in the upper right hand corner of the Presentation pane

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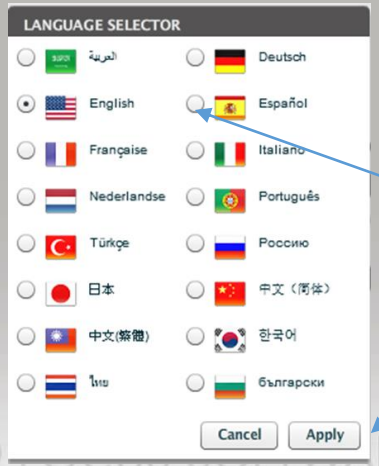
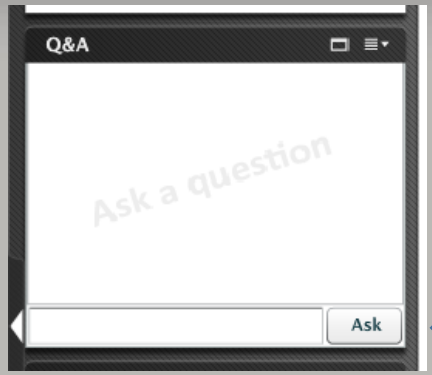
# Webinar Control Panel

- Session Q&A:

  Please type questions in the Q&A pane and click on "Ask"
- Choose the language in which you would like to ask your questions

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# Tweet Your Questions

# SEVEN TIPS FOR

implementing a

# RELIABLE FRAMEWORK DESIGN

in a DevOps world

# Learning Objectives

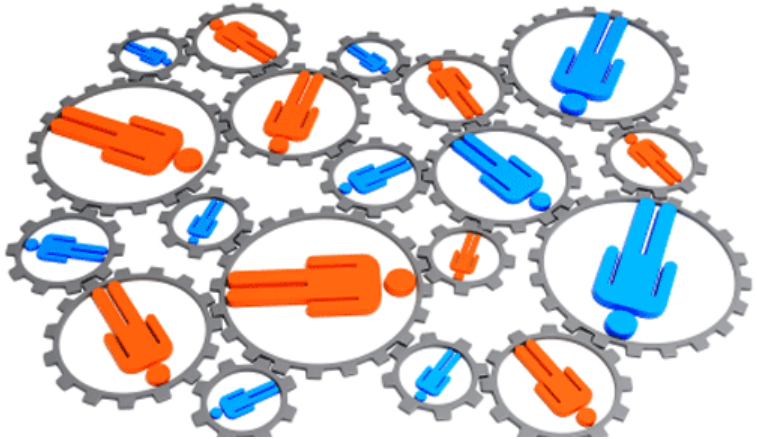
- Fundamentals of a successful automation framework
- Value of an automation framework
- Seven tips to design and implement an automation framework in DevOps

# A Well-Designed Framework

- *Decreases* automated test development time
- Enables tests to be created *sooner*
- *Decreases* maintenance
- *Increases* test automation coverage
- Puts the power of automation in *more hands*

# Automation Framework Characteristics

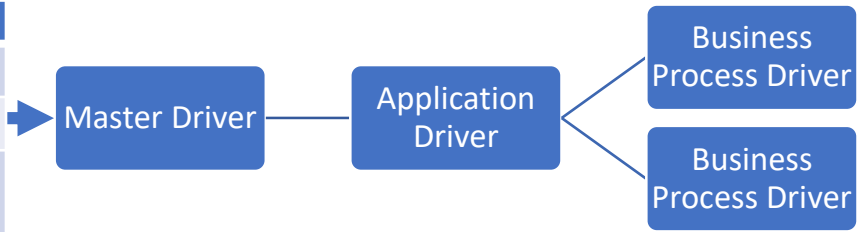
- Modular code
- Scalable
- Error handling
- Reliable
- Data separated from code



# Common Elements of Successful Frameworks

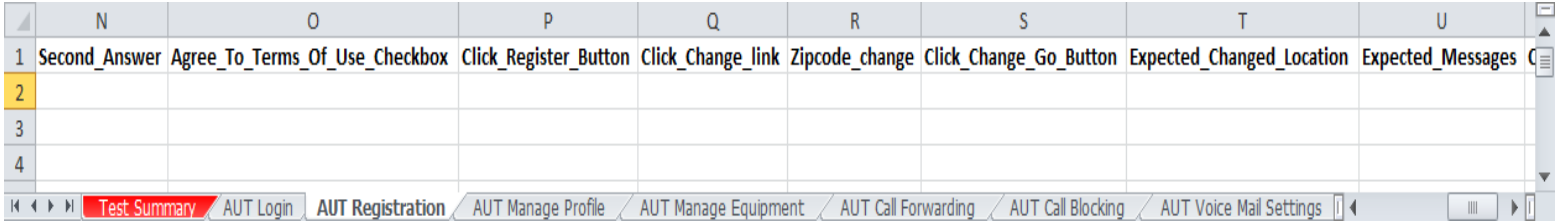
1. Simple front-end
2. Maintainable back-end
   A. Master Driver
   B. Application Driver
   C. Business Process Driver
3. Data

| UserName | PassWord | Exp_Results |
|---|---|---|
| pmccart | Hey*jude | Success |
| jlenno | Imagine! | Fail |
| gharri | Wmggw# | Fail |



# Front-End Description

- Front-end utilizes Excel for script design
  - Each column represents a test step
  - Each record (row) a test iteration
  - Each tab represents a Business Process
  - Each BP tab contains all necessary parameters to create positive and negative tests
  - Output is captured to Output Parameters and can be used in subsequent iterations



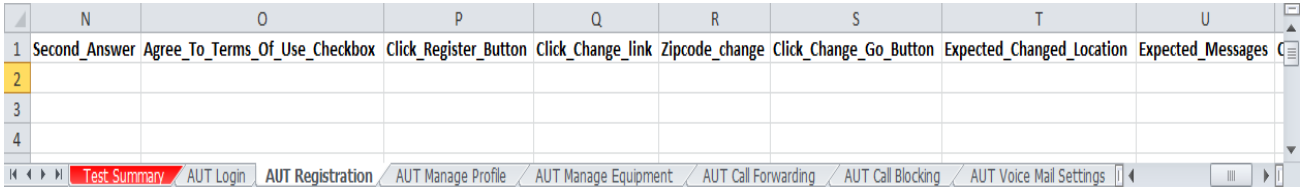
| | N | O | P | Q | R | S | T | U |
|---|---|---|---|---|---|---|---|---|
| 1 | Second_Answer | Agree_To_Terms_Of_Use_Checkbox | Click_Register_Button | Click_Change_link | Zipcode_change | Click_Change_Go_Button | Expected_Changed_Location | Expected_Messages |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |

Test Summary | AUT Login | AUT Registration | AUT Manage Profile | AUT Manage Equipment | AUT Call Forwarding | AUT Call Blocking | AUT Voice Mail Settings

- Multiple AUTs can be incorporated by adding tabs associated with other AUTs

# Front-End Description (con't)

- A Master Excel Template contains all the business process for a given application.



| | N | O | P | Q | R | S | T | U |
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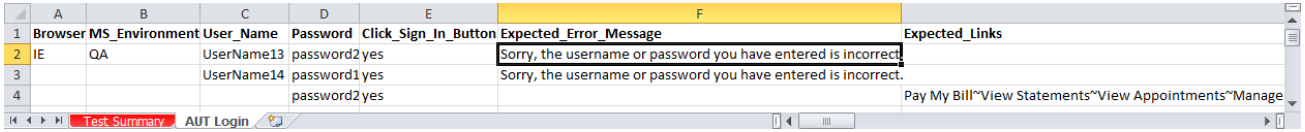
| 1 | Second_Answer | Agree_To_Terms_Of_Use_Checkbox | Click_Register_Button | Click_Change_link | Zipcode_change | Click_Change_Go_Button | Expected_Changed_Location | Expected_Messages |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |

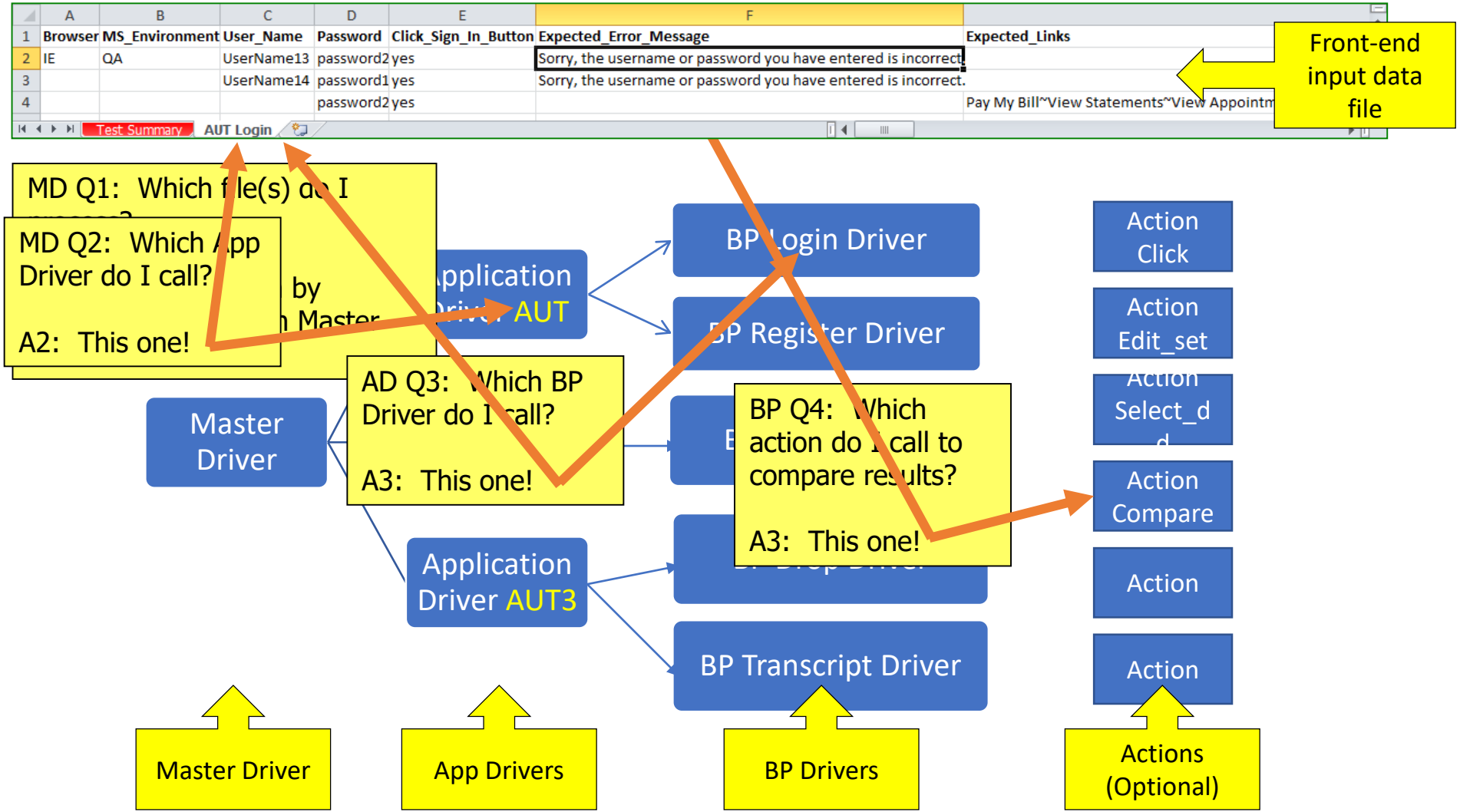
Test Summary | AUT Login | AUT Registration | AUT Manage Profile | AUT Manage Equipment | AUT Call Forwarding | AUT Call Blocking | AUT Voice Mail Settings

- To create a new test, simply save the Master Template as another file, remove the tabs not required for the test and reorder in the order they will execute, then apply the **data**.



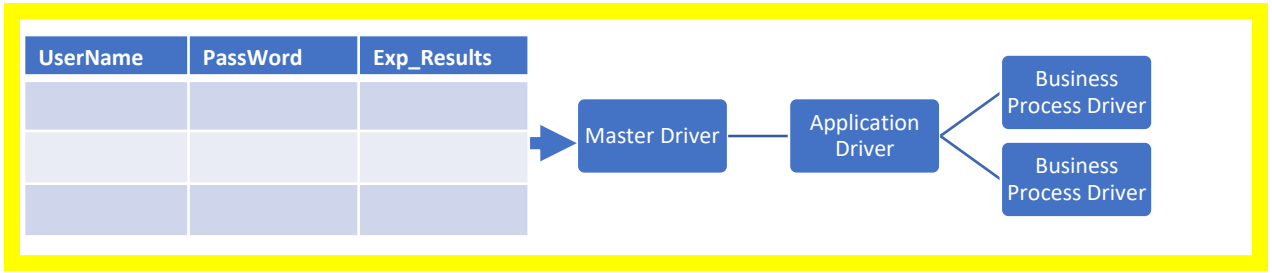
| | A | B | C | D | E | F | |
|---|---|---|---|---|---|---|---|
| 1 | Browser | MS_Environment | User_Name | Password | Click_Sign_In_Button | Expected_Error_Message | Expected_Links |
| 2 | IE | QA | UserName13 | password2 | yes | Sorry, the username or password you have entered is incorrect. | |
| 3 | | | UserName14 | password1 | yes | Sorry, the username or password you have entered is incorrect. | |
| 4 | | | | password2 | yes | | Pay My Bill~View Statements~View Appointments~Manage |

Test Summary | AUT Login


A B C D E F
1 Browser MS_Environment User_Name Password Click_Sign_In_Button Expected_Error_Message Expected_Links
2 IE QA UserName13 password2 yes Sorry, the username or password you have entered is incorrect.
3 UserName14 password1 yes Sorry, the username or password you have entered is incorrect.
4 password2 yes Pay My Bill~View Statements~View Appointm
Test Summary
AUT Login
Front-end input data file
MD Q1: Which file(s) do I
MD Q2: Which App Driver do I call?
A2: This one!
by
Master
Application Driver AUT
Master Driver
AD Q3: Which BP Driver do I call?
A3: This one!
Application Driver AUT3
BP Login Driver
BP Register Driver
BP Transcript Driver
BP Q4: Which action do I call to compare results?
A3: This one!
Action Click
Action Edit_set
Action Select_d
Action Compare
Action
Action
Master Driver
App Drivers
BP Drivers
Actions (Optional)

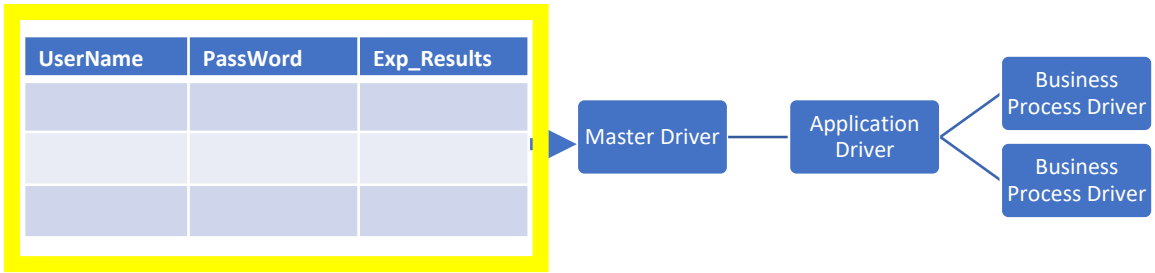
# Framework Design Tips

1. Know your users
2. Document and communicate standards
3. Know the scope and expectations of automation within your organization



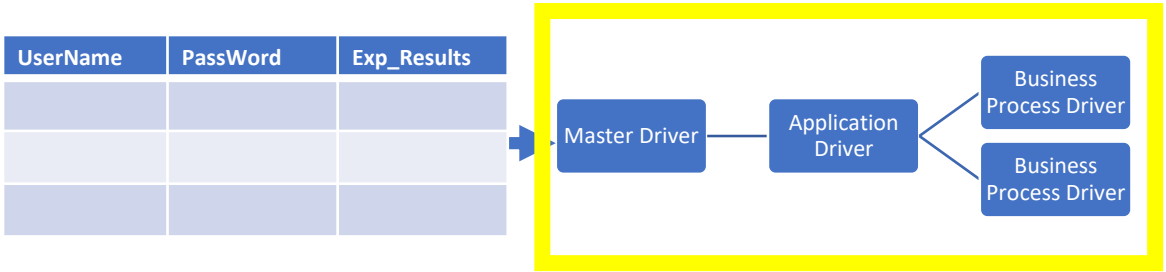
# Front-End & Data Design Tips

4. Use common tool for data input
5. Incorporate simple keywords



# Back-End Design

6. Build the back-end to support the front-end
7. Use good, common-sense coding best practices



# Applying Your Framework

- Initially start with getting to CI and Continuous Delivery
- Start with automation of unit tests
- Automate your deployments to stage environment ASAP
- Configure CI system to launch all tests based upon appropriate event (build, deployment, or time)
- Releasing SW on daily basis?  Time to look at Continuous Deployment

# *Thank you!*

Bob Crews
Checkpoint Technologies, Inc.
Email: bcrews@checkpointech.com

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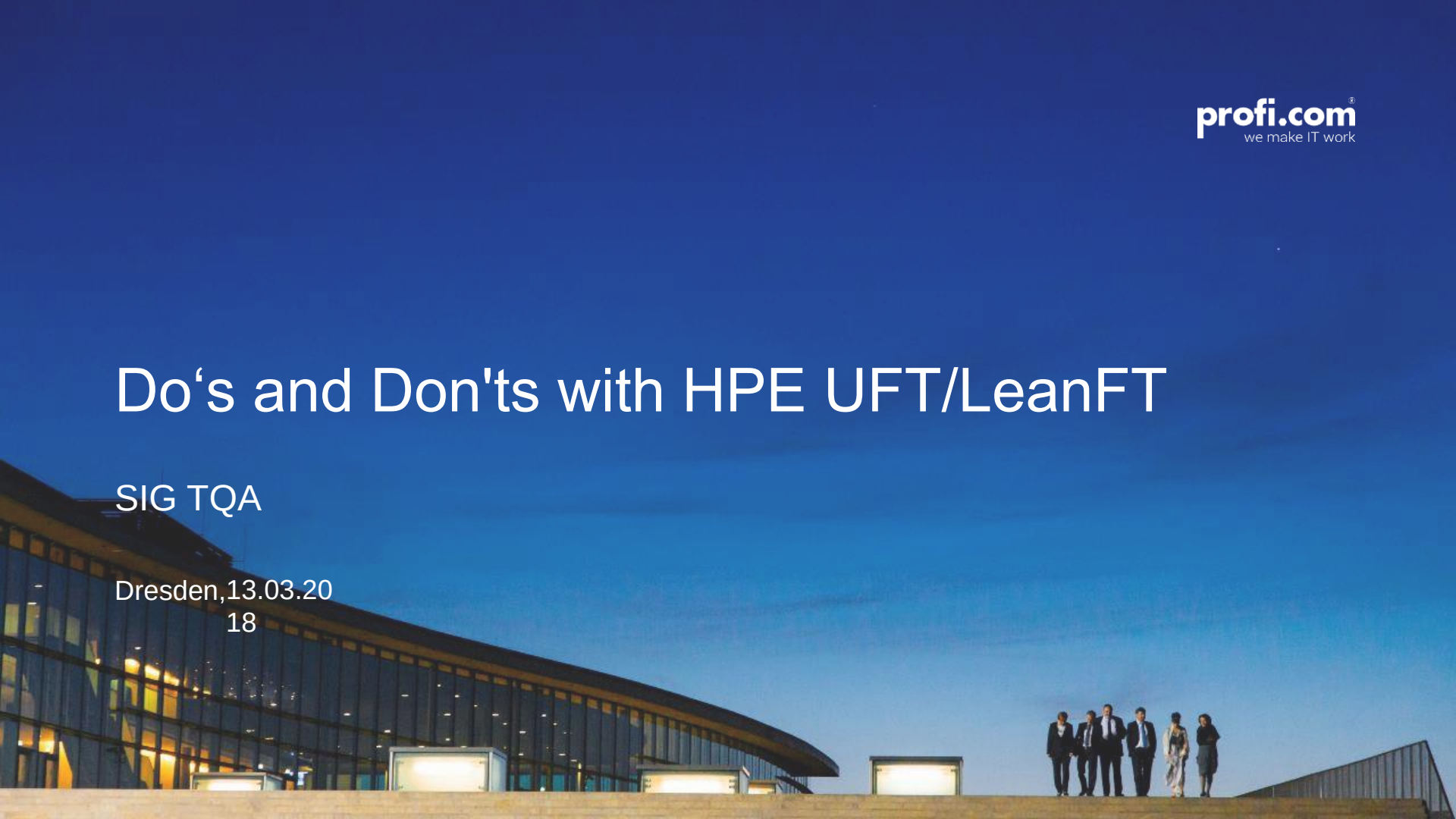
# Do‘s and Don'ts with HPE UFT/LeanFT

SIG TQA

Dresden,13.03.2018



# Speakers

Dr. Carsten Neise

- Senior IT Consultant
- Focus: Data Management, Service Virtualization

- In VIVIT since 09/2015
- Local Chapter

- Together with Dr. Andreas Birk : SIG – TQA
- Since 01/2017 build up SIG – PE in Germany

- Offerings: regional user group meetings, webinars, yearly global meetings

# Agenda

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1. Shift Left vs. Shift Right
2. Installation
3. Object Identification
4. API testing
5. Using BPT
6. Execution of Tests (ALM / Jenkins)

# Shift Left vs. Shift Right

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- Before installing a certain Tool, define the goal of your testing activities
  - UFT: Shift Right
  - LeanFT: Shift Left

- Purpose of UFT
  - GUI and API tests
  - Integration tests, system tests
- Purpose LeanFT
  - Unit test, behavior driven and test driven development

→ Use the combined power of both tools!

# Installation

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- UFT
  - Local installation – admin rights
  - Supports Only Windows
  - Use Packaging in large companies
  - For using demo-application, requires WPF-Add-in (some companies do not install this)
  - ALM Client Log Wrapper helps in analysing BPT runs. Use also QC-Sense
- LeanFT is add-on Visual Studio or Eclipse
  - Windows and Linux
  - Prerequisite: Visual Studio, Eclipse, IntelliJ, NetBeans
  - Use in combination with test framework (NUnit, JUnit, TestNG, …)
  - RunTime Engine in CI/CD engine

# Object Identification

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- UFT
  - stores object repository in a xml file
  - Be careful in growing the object repository (too large files)
  - Use native properties to extent identification
  - Use regular expression, parameters, …
  - Descriptive Programming sometimes helpful for debugging

- LeanFT
  - Check supported technologies → and then give suggestion
  - storage and using of objects inside code
  - extra class (application model) (tsrx)

# API testing

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- UFT
  - be careful for using in large tests (UFT tends to become in performant)
  - Sometimes tedious to implement individual proxy-settings (e.g. OAUTH-Tokens not supported natively)

- LeanFT
  - not natively support, but can be handled via webservice libraries for C#, JAVA

# Using BPT

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- UFT
  - Be careful in architecture using BPT – every business component is loaded from MF ALM
  - use same application areas (so that UFT has not be started for every component)
  - Best Practice: keep an eye on robustness rather than performance
- LeanFT
  - Use so-called LFT-components – which represent an analogon to BPT
  - Integrate LFT into ALM – but can not be mixed with other types of BPT
  - Best-practice: small tests, short run-times

# Execution of Tests (ALM / Jenkins)

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- UFT
  - ALM
  - ALM + Lab Extension
  - Octane
  - Challenges at customer side: unlock screensaver; get remote access to target machine for running UFT with technical user
- LeanFT
  - LeanFT-tests can only be run by the .dll or .jar-files
    - Manually import LEANFT-TEST
    - Use LeanFT export and import tool
    - Use VAPI-XP Test-type
  - Run from CI-Server (Jenkins)
  - Run from Octane

# LeanFT & Selenium

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- Use LeanFT for extent Selenium in object detection
- Run Selenium tests in MF Framework
  - C# (Selenium) → C# (LeanFT)
  - Java (Selenium) → Java (LeanFT)
- Configure webDrvier is sometimes painful
- Big advantage LeanFT: Support (browser support, settings inside LeanFT – all this comes as patch)
  - Selenium is OpenSource

# Thank you

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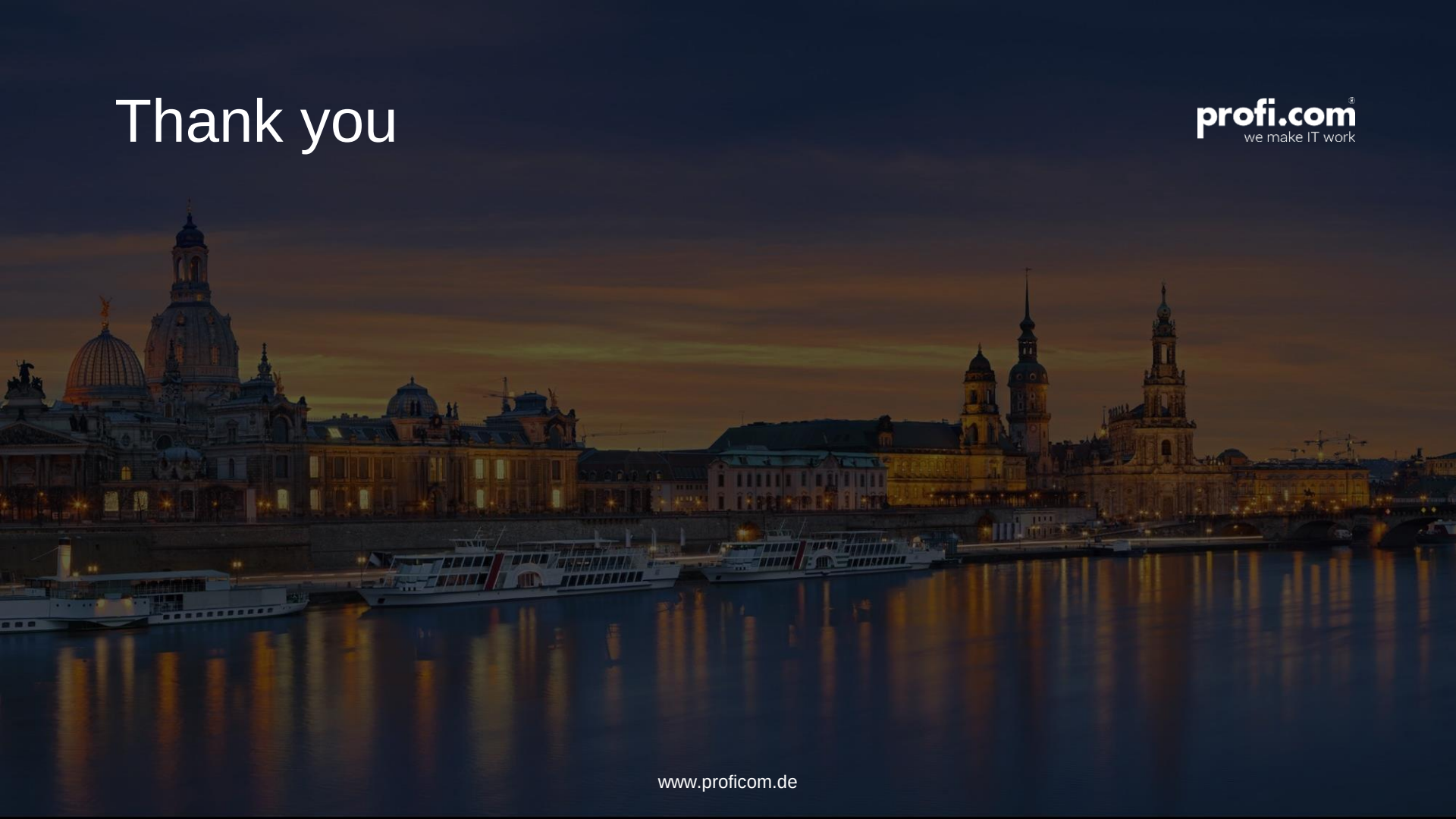

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# Upcoming Vivit Webinars

March 15, 2018
SIG Talk: IT Operations - ITSMA/ Hybrid Cloud Management
8:00 - 9:00 AM PST (Los Angeles), 12:00 PM - 1:00 PM EST (New York), 18:00 - 19:00 CET (Frankfurt)
https://vivitworldwide.site-ym.com/events/EventDetails.aspx?id=1071494&group=

March 28, 2018
Accelerate High-Quality App Delivery with the Micro Focus DevOps Suite
8:00 - 9:00 AM PST (Los Angeles), 12:00 PM - 1:00 PM EST (New York), 18:00 - 19:00 CET (Frankfurt)
https://vivitworldwide.site-ym.com/events/EventDetails.aspx?id=1073322&group=



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# Thank You

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- For more information, go to:

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# Thank You

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