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OTT Robotics



**GERMAN
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AWARD '20
WINNER**



EMMA

OTT Robotics



Your RPA Challenges

1. **Interoperability**: Many business processes are operated via a wide range of different systems (not only Windows or Web)
2. You need to **decrease costs** for business process automation.
3. Your automations need to be **reliable** and need to **handle unexpected situations** to cope with **reality** and remain **resilient**.
4. **Missing documentation**: what has been done and how?
5. **Qualified employees** are **missing** or even worse:
6. Qualified employees **leave your company** and take the valuable company-, product- and process-know-how!
7. You have very skilled and less skilled **employees**. What if you could **empower** the second group as well while **motivating** them?

Your Solution: The EMMA Promise

1. Easy & Cost-efficient Robotic Test- & Process Automation (RPA)
2. for Any Software on All Devices
3. End to End operation on Unmanipulated Systems
4. with Audit Compliant automated Reporting
5. EMMA Automates and Conserves your valuable Company and Process Know-how and Keeps Working when qualified employees are sick, in vacation or even leave your company...

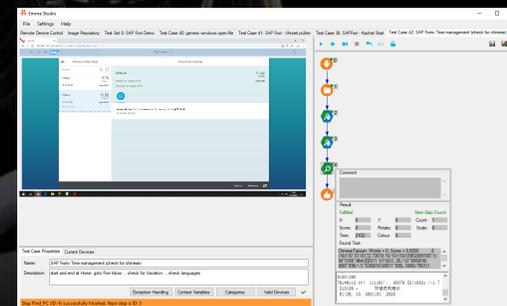
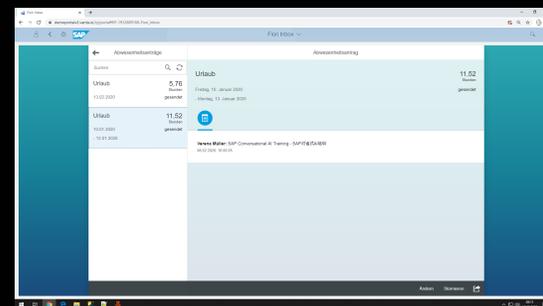
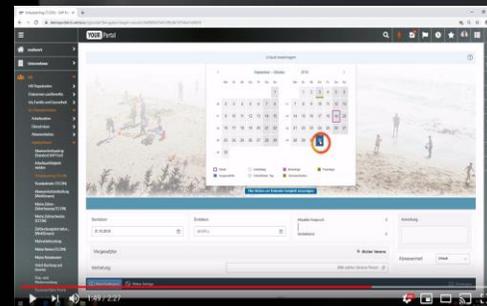
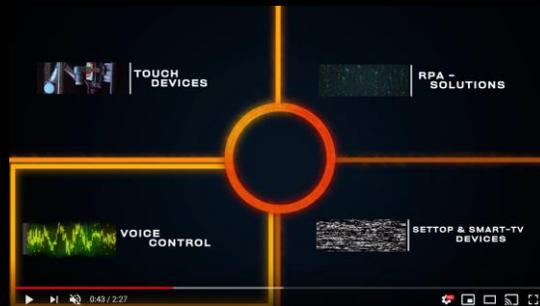
EMMA in Action

To see a 2 min video of EMMA in Action, please visit:

www.Wianco.com

or see the 2 min video on YouTube:

<https://www.youtube.com/watch?v=pYn3Ak2yy1U>



How can YOU Save Money and Increase YOUR Productivity?



- Effective time of **manual testing / manual operations** on repetitive tasks per working day:
3,5 hours (NOT including the creation of a meaningful test/RPA plan and resulting reports!) = $3,5 \text{ h} * 5 \text{ days/week} = 17,5 \text{ h/week}$
- **EMMA** tests or automates $24 \text{ h} * 7 \text{ days} = 168 \text{ h/week}$
- Measured **productivity** of EMMA: **~ 10 times higher** compared to manual processes with fully automated audit compliant documentation of performed actions, which can be automatically sent via email for continuous integration in further operations and reporting processes
- Let EMMA **Certify Your Quality** or **Prove** what she did !

EMMA: Optional Hardware- & Software-based Robot with Artificial Intelligence (AI)

Optional Hardware



EMMA Body:
19" Server-Rack
All components aligned in 19" server rack.

EMMA Eyes & Arm:

Kinematics operates the displays of touch devices „by hand“. Machine Vision by high-resolution industry camera



EMMA Telekinetics:

The IR-Transmitter within the rack operates Set-Top-Boxes, SmartTVs and Digital Signages

EMMA Physics: Premium Hardware

- 19" server, optimized for Audio- and Video Content
- Special Development: Calibration of kinematics, camera and devices
- Infrastructur (HDMI Switch, Power Supply, Network Router)



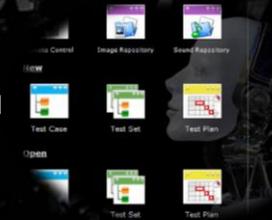
Software

EMMA Service

Management & Scheduling of tests and robotic process automation

EMMA Studio

Project creation, operation and analysis of automated tests



EMMA Configuration

Configuration of testparameters, optional hardware, devices and environments

Modular Physiognomie

- PC – Operation of any System (e.g. PC Clients, Web Applications, Mac OS, Citrix, Linux, ...)
- Touch – Control of any Touch Device (optional)
- Telekinetics for SmartTVs, STBs, OTT Devices, Digital Signages (optional)

EMMA – Benefits compared to other RPA Solutions

Classic: Screen Recording Solutions	Classic: Scripting	Common RPA solutions	EMMA
+ No expensive developers needed (manual testers / RPA operators can use screen recording)	+ More options than Screen Recording	+ More options than Screen Recording and Scripting	+ More options than any of the others
+ Fast generation of automation script	+ Independent from position of objects to check (markup check for existence of related elements)	- Only work on Windows systems - No automated audit compliant reporting!	+ AI and Object Recognition works, even after major changes of the application elements and structure
- Doesn't work anymore after minor changes: e.g. of Button/Text Input/DropDown/Control position/form changes, ... → Often already useless right after the creation of the screen recording	- Often: doesn't reveal visibility related bugs (caused by elements hidden by another overlay, memory issues of device, ...)	- No cross-device solution - Missing language detection and translation services, ... - Do not support voice-controlled software, e.g. SAP CoPilot/ SAP Conversational AI	+ Does not require developers and improves the automation skills of regular employees! + Works for PCs, Touch Devices, and Voice Controlled Systems with one solution
- Not available for every device type	- Developers required - Not available for every device type	- Developers required - Not available for every device/application type	+ Use of scripts still possible (e.g. network trace), + many more...

Artificial Intelligence

Definitions:

- **Intelligence:** The capability to **recognize** and **solve problems**.
- **Advanced Intelligence:** **Learning** from solved problems and other data to increase the capability to recognize and solve **more** and **different** problems.
- **Artificial Intelligence (AI):** made or produced by human beings rather than occurring naturally, especially as a copy of something natural (e.g. human behaviour).
- **Machine Learning (ML):** scientific study of **algorithms** and **statistical models** that computer systems use **to perform a specific task** without using explicit instructions, **relying on patterns** and inference instead. It is seen as a **subset of AI**.

Prerequisites:

- **Perception:** ability to use input from sensors to deduce aspects of the world (e.g. Machine Vision)
- **Natural Language Processing** gives machines the ability to **read/listen** and **understand** human languages.
- **Understanding** human language is the ability to **decide** how to proceed with the received information (e.g. using a decision tree or other techniques) and **take appropriate actions** in order to fulfill desired tasks.

EMMAs' Cognitive Services

▪ Machine Vision

- Object Recognition (Image Recognition, Shape Recognition, Object Deviations)
- Optical Character Recognition (OCR)
- Reading from Screen and correlating to previous or succeeding Test Steps
- Video Stream Recognition

▪ Listening

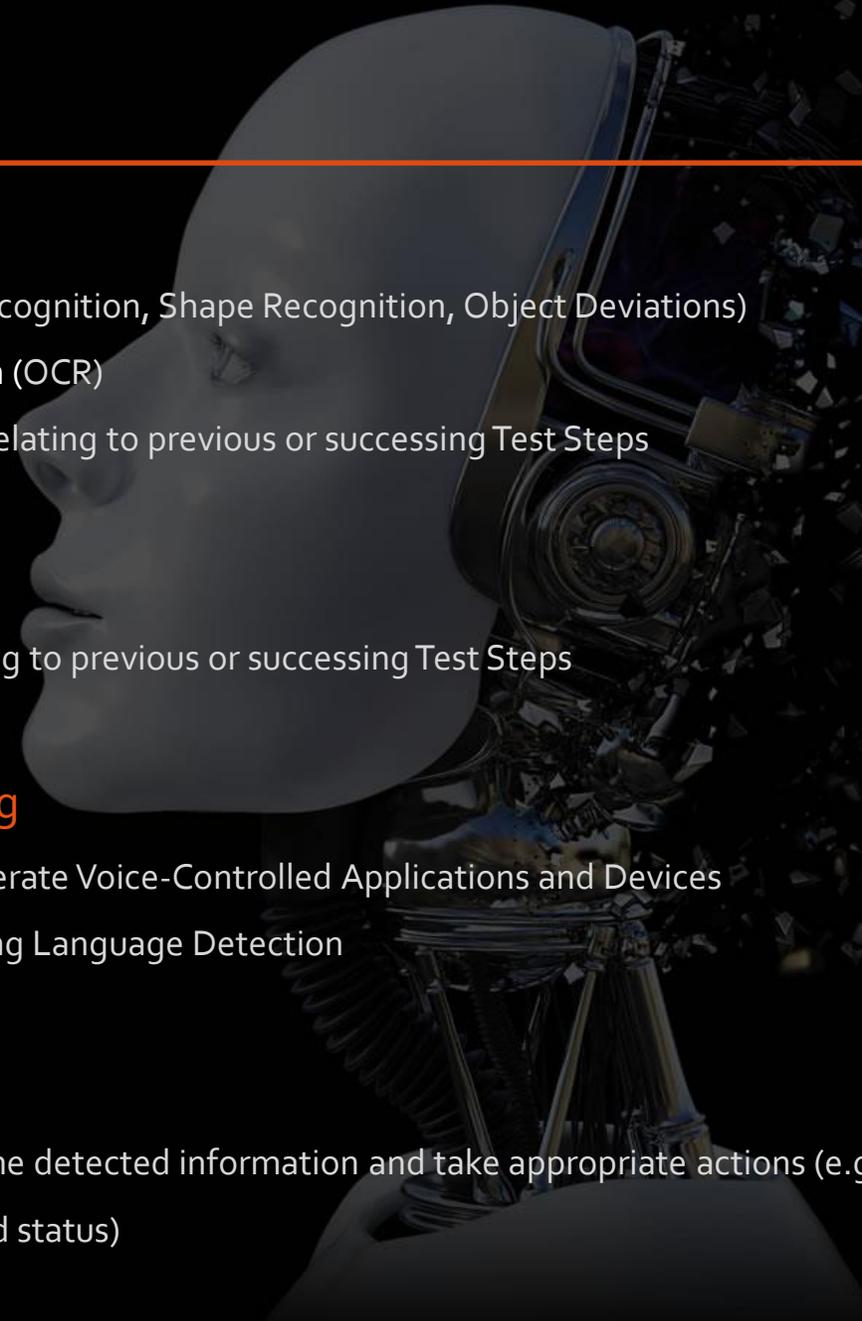
- Speech-to-Text and correlating to previous or succeeding Test Steps
- Audio Detection

▪ Natural Language Processing

- Text-to-Speech in order to operate Voice-Controlled Applications and Devices
- Language Recognition & Wrong Language Detection
- Language Translation Service

▪ Understanding

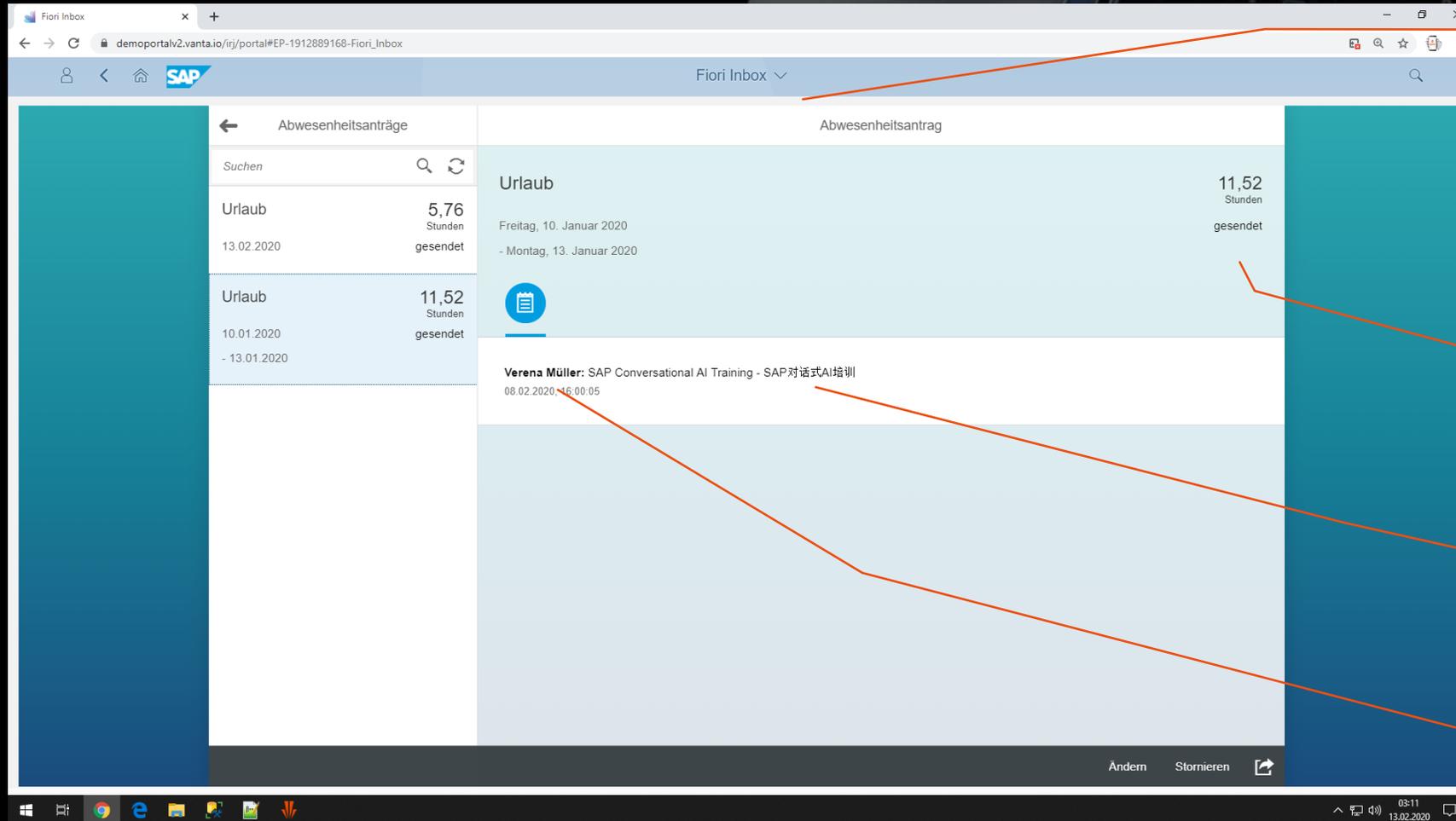
- Decide how to proceed with the detected information and take appropriate actions (e.g. perform calculations and verify system functionality and status)



Your Audit Compliant Report – Be Revision Proof

- EMMA goes far beyond logging about what she does for you: she proves it to YOU and AUDITORS and provides evidence incl. Screen Shots and TimeStamps for every Process Step and Decision!
- 3 different levels of Reporting:
 - Board Member Level
 - Operative Manager Level
 - Full Process Step Level for Debugging, **Revision or IT Forensics**
- **Avoid** the past usual **communication ping-pong** between RPA Consultant and Process Owner and save time and costs
- Go from ordinary Testing or RPA to **Certification of IT and Process Quality**

EMMA Studio – ERP Automation example e.g. for SAP Fiori Applications



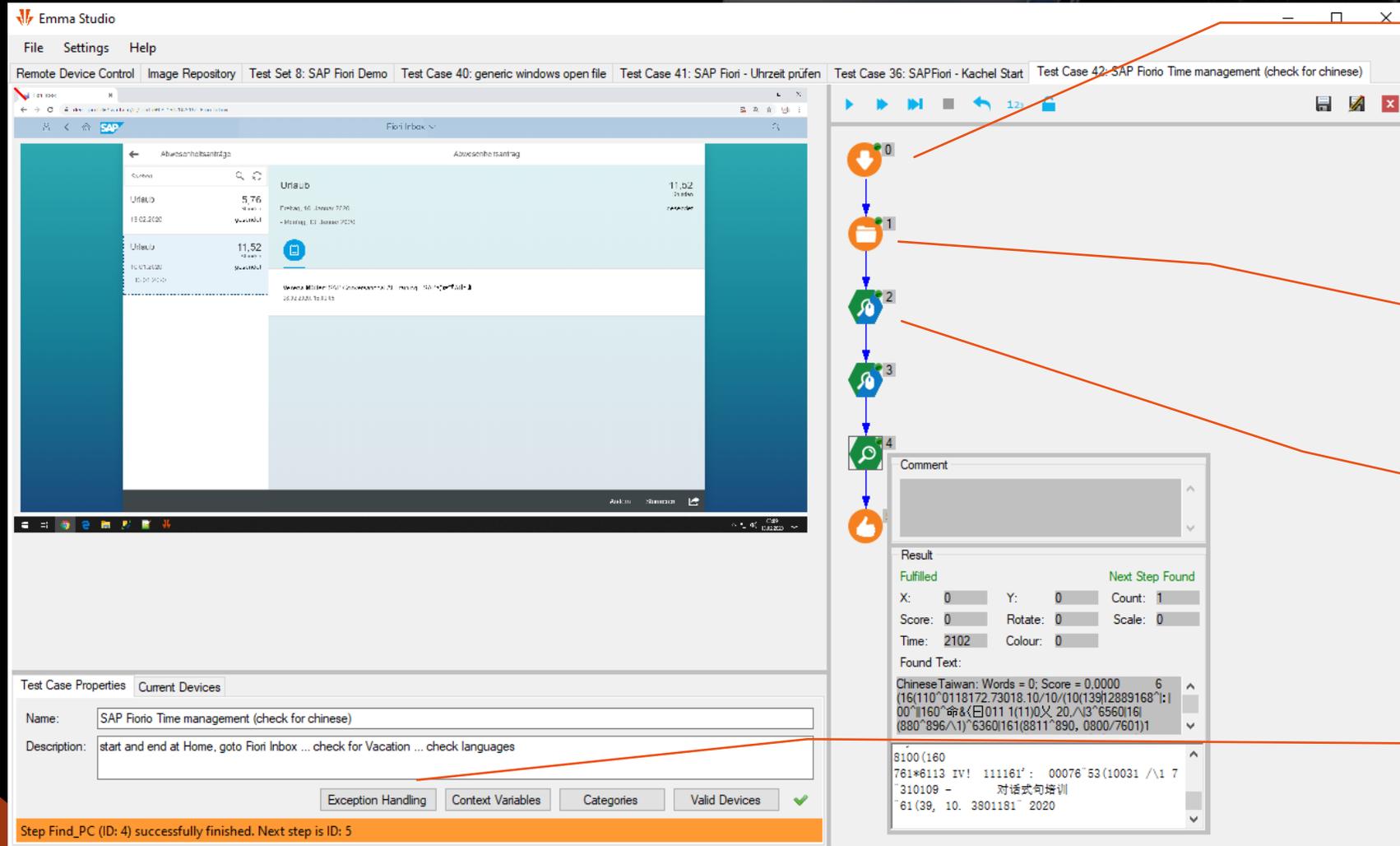
EMMA automates any system interaction like a human does and really **looks** at the screen

E.g. processing a vacation request and **checking complete application process flow** (e.g. in Banking System, Assurance Portal, ...)

Integrated **wrong language** detection

EMMA can **change user roles** and test related process flows before deploying to production

EMMA Studio – ERP Automation example e.g. for SAP Fiori Applications



The screenshot shows the Emma Studio interface with the following components:

- Menu Bar:** File, Settings, Help
- Toolbar:** Remote Device Control, Image Repository, Test Set 8: SAP Fiori Demo, Test Case 40: generic windows open file, Test Case 41: SAP Fiori - Uhrzeit prüfen, Test Case 36: SAP Fiori - Kachel Start, Test Case 42: SAP Fiori Time management (check for chinese)
- Main Window:** Displays the SAP Fiori application interface with a list of vacation requests (Urlaub) and a detailed view of a specific request.
- Right Panel:** Contains a workflow diagram with steps 0 through 4. Step 4 is highlighted, and a detailed action result window is open for it.
- Action Result Window:** Shows the following data:

Result		Next Step Found
Fulfilled		
X: 0	Y: 0	Count: 1
Score: 0	Rotate: 0	Scale: 0
Time: 2102	Colour: 0	
Found Text:		
ChineseTaiwan: Words = 0; Score = 0.0000 6		
(16(110°01'18172.73018.10/10/(10(139(12889168°:1		
00°1160°命&<日011 1(11)X 20/∧(3°656016		
(880°896/∧1)°6360161(8811°890, 0800/7601)1		
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310109 - 对话式句培训		
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- Test Case Properties:** Name: SAP Fiori Time management (check for chinese); Description: start and end at Home, goto Fiori Inbox ... check for Vacation ... check languages
- Buttons:** Exception Handling, Context Variables, Categories, Valid Devices
- Status Bar:** Step Find_PC (ID: 4) successfully finished. Next step is ID: 5

Intuitively configurable processes and related workflows

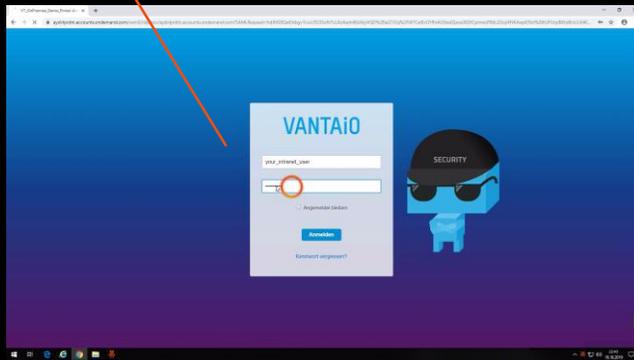
Nested processes to avoid redundant work (e.g. for Login processes)

Combined „Find & Click“ Action to reduce process complexity

Exception Handling for “unexpected system behaviour”, e.g. info-, message-, error popups, ...

EMMA RPA – Examlary Automation Flow (1/2)

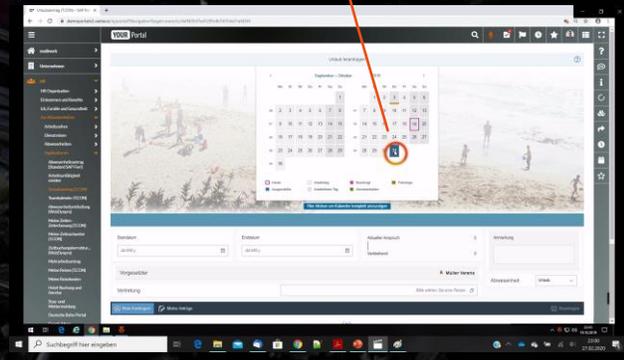
1.) Perform Login



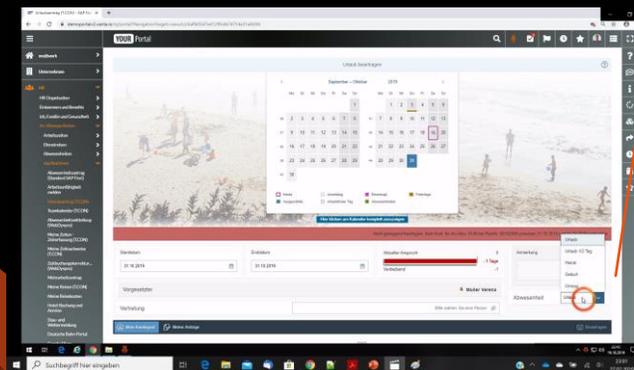
2.) Select Modul



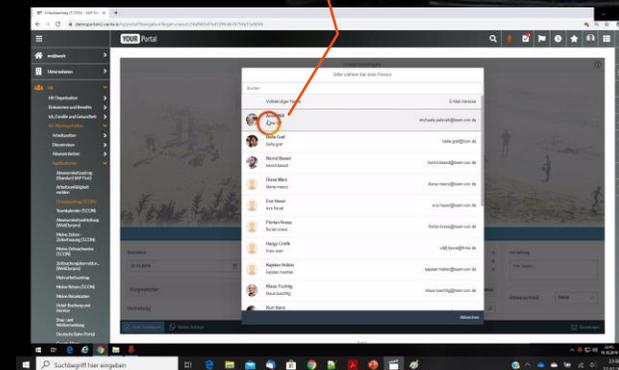
3.) Select Date in Calendar



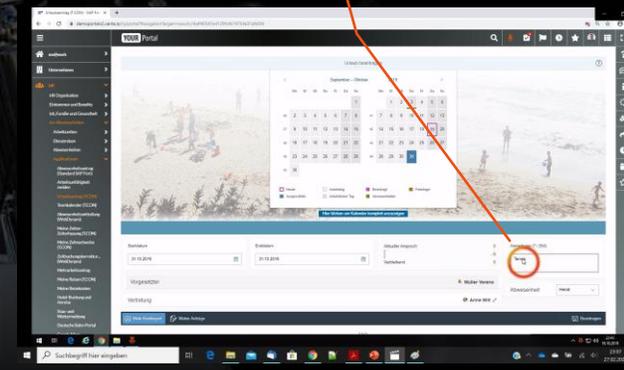
4.) Select Reason from DropDown Options



5.) Select process relevant Person

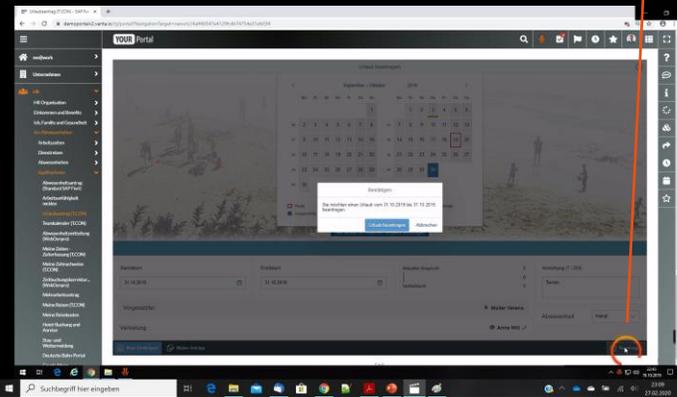


6.) Enter process relevant Data

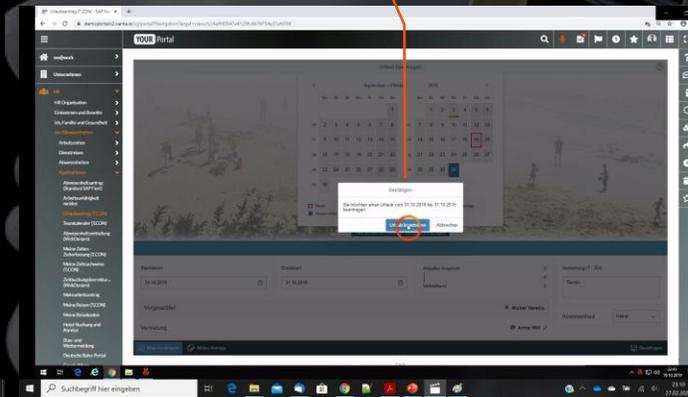


EMMA RPA – Exemplary Automation Flow (2/2)

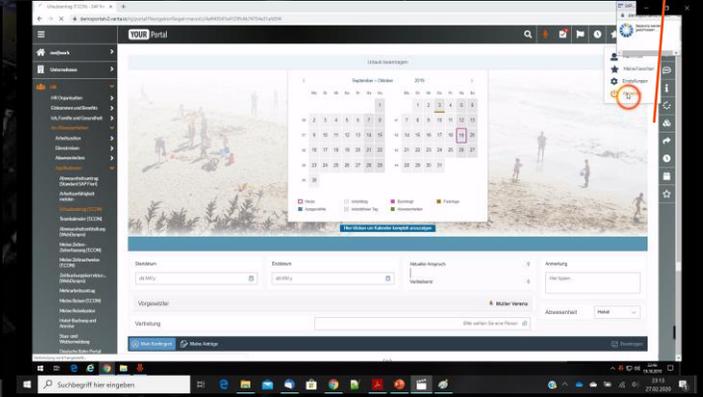
7.) Operate Buttons to proceed in Workflow



8.) Operate Popup Messages based on displayed Text



9.) Finish Workflow, Logout and Close Application



- EMMA is independent from object sizes or positions.
- EMMA can Read and Correlate information from previous steps to later steps.
- EMMA can handle unexpected situations (e.g. close Info-, Message, Warning-, Error Popups).
- If an object changes, you don't have to edit all depending processes.
- No need for developers and skilled engineers. Use the valuable know-how of your employees to automate your processes with EMMA...

Why is EMMA so advanced?

1. EMMA sees, what she's doing using **Machine Vision** and **Object Recognition** as well as **Optical Character Recognition (OCR)** and **Natural Language Processing**
2. She **removes** the need for qualified RPA engineers or software developers (**skills shortage**) doing tedious, repetitive jobs for e.g. SAP or Salesforce applications, Assurance Portals, Finance, Accounting or HR Software...
3. EMMA can **switch systems and devices** within one process in order to check **cross system interoperability** and correctness (e.g. start Process A on the iPhone and proceed with Process A on the PC or validate the performed tasks by using another system in parallel)
4. Works **24/7 from any location** worldwide on any system worldwide
5. Continuous development of **AI and Machine Learning** capabilities to further **RPA** (robotic process automation) in order to automate very complex jobs in a company
6. Teams of previously **manual operating employees** for a certain software system now **evolved to offer automation services**, using EMMA for other areas in the enterprises and grow the enterprise intelligence by conserving the know-how into EMMA.

You can get an industrial advantage. Visit, call or email us! Remote Demo available.

Wianco OTT Robotics GmbH

Schlosspark 1
D-64342 Seeheim-Jugenheim
Germany

Michael Wilczynska
- Managing Director -

+49 151 4613 4844
michael.wilczynska@wianco.com
www.wianco.com



EMMA – Go Automatic.

