



SAP Innovation Awards 2019 Entry Pitch Deck

Productivity boost for SAP workplaces through Eye Control
4tiitoo GmbH



Eye Control in office environments for SAP ERP https://youtu.be/BG7qXc_LENs and accompanying enterprise applications <https://youtu.be/hsoMm2ubbkY>

Eye Control in shopfloor environments for SAP DMC <https://youtu.be/cljW4vL3AgE>

Productivity boost for SAP workplaces through Eye Control

4tiitoo GmbH

4tiitoo

“Quote”

With NUIA Eye Control, daily accounting workflows in SAP can be carried out more efficiently. Consequently, the reduced use of the mouse makes operating the computer more ergonomic and convenient. Using NUIA's custom macros, we can even automate repetitive activities and trigger them with a single glance.”

Stephan Odoerfer, Co-founder & CSO at 4tiitoo GmbH

Challenge

Employees daily spend up to 21% of their time for non-value creating computer tasks such as moving the mouse (up to 6.000m) and clicking the mouse (up to 8.000 times). This sums up to a huge unused potential as well as facilitates the “RSI” disease, which reduces productivity.

Solution

4tiitoo's software platform NUIA Productivity+ increases the productivity and ergonomics of computer workplaces by controlling enterprise applications based on user intention, using a combination of eye tracking and A.I.

Outcome

NUIA significantly decreases mouse usage and automates workflows, which increases productivity by 4-12% and leads to a more ergonomic and convenient work experience.

4-12% increased efficiency across workplaces (from ERP to CRM to PLM to Office)

More ergonomic workplaces, lead to a higher employee satisfaction and over time reduced number of sick days

Innovative/attractive workplaces strengthen employer branding



Business Challenge & Objectives

A lot of time is lost daily – until today!

Every day employees at computer workplaces move their mouse up to 6.000m, perform up to 8.000 mouse clicks and move their hand from the keyboard to the mouse and back just for a single mouse click up to 2.000 times. This sums up to 21% or 1,7h per day in non-value creating computer tasks, as well as facilitates the "RSI" disease, which reduces productivity and leads to higher sickness rates.

Reduce mouse usage and automate daily repetitive workflows, which cannot be done with tools such as RPA.



Project / Use Case Details

The implementation at a customer environment was initially executed as a PoC, followed by a rollout in the accounting department of a german tier 1 automotive supplier.

Example use cases (as seen in the video):

NUIA constantly predicts what element (button, input field, tab etc.) the user wants to interact with.

1. Quick Click: Just by looking at an input field or button and pressing the trigger key (user defined key on the keyboard, e.g. Shift or Ctrl), the user is able to select/trigger the respective element without taking the hands off the keyboard.
2. Auto Gaze Selectors: Often used elements such as tabs or specific buttons can even be triggered completely hands-free.

These are just two of currently 10+ NUIA Productivity+ features, which ensure a much continuous flow of work in SAP.



Benefits and Outcomes

Business / Social

More productive work

Optimized workflows through significantly reduced mouse movements, mouse clicks and switching movements from keyboard to mouse back to keyboard lead to a 4-12% productivity potential across all applications and workplaces (from ERP to CRM to PLM to Office).

IT

Enterprise-ready plug & play

As NUIA is completely hardware- and software-independent, there is no need to modify existing applications in any way. The software is optimized for the processes and requirements of enterprise companies, which ensures an easy and fast installation and configuration.

As an intuitive UX is key we see a steep learning curve on the user side with low support effort.

Human Empowerment

More attractive workplaces

Reduced mouse usage automatically leads to more natural and ergonomic computer operation, which leads to a higher employee satisfaction and over time reduced number of sick days.

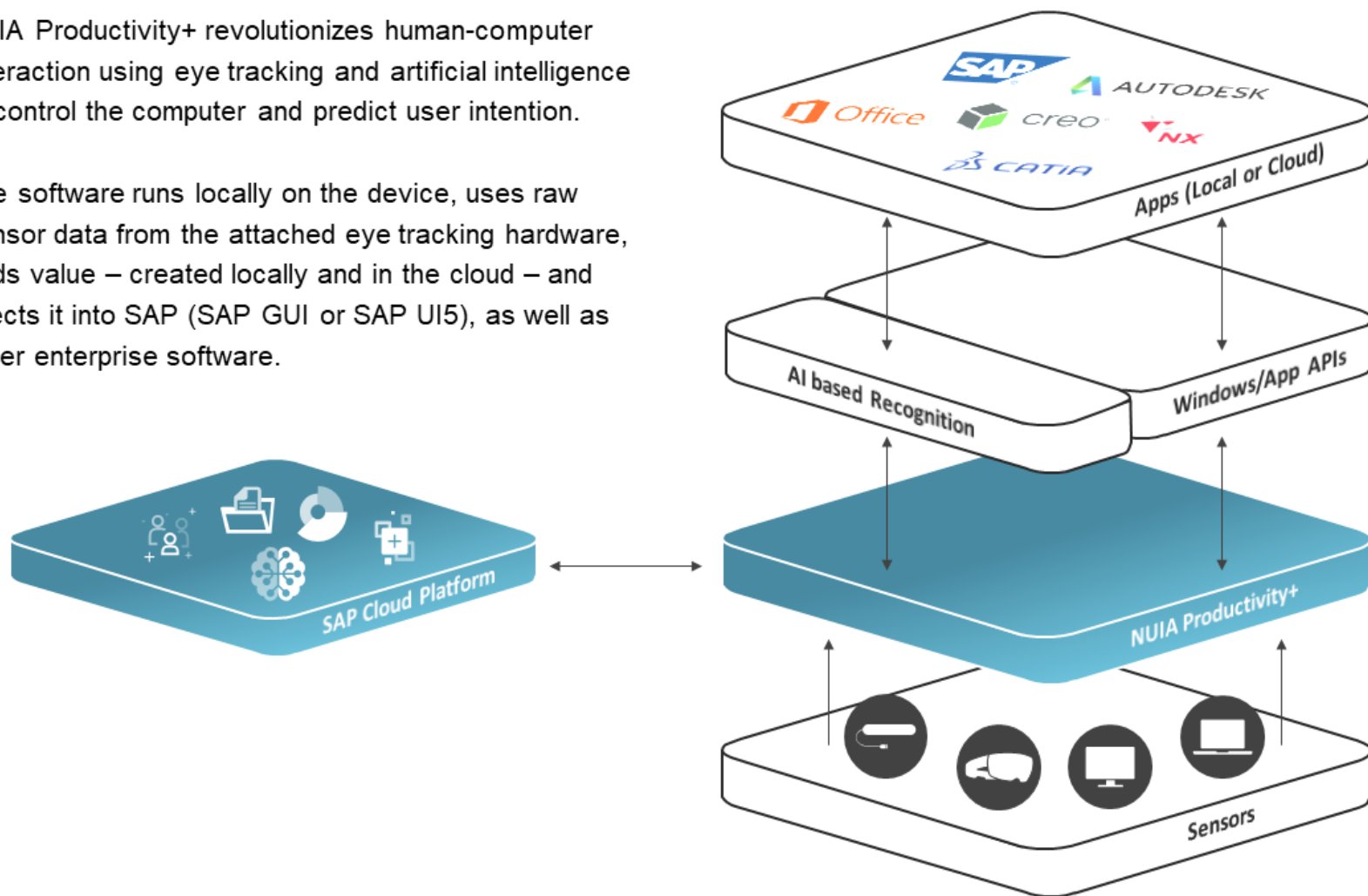
Furthermore innovative/attractive workplaces strengthen employer branding.



Architecture

NUIA Productivity+ revolutionizes human-computer interaction using eye tracking and artificial intelligence to control the computer and predict user intention.

The software runs locally on the device, uses raw sensor data from the attached eye tracking hardware, adds value – created locally and in the cloud – and injects it into SAP (SAP GUI or SAP UI5), as well as other enterprise software.





Deployment

Date of Deployment or POC: 10-2018

Number of live users: 20

SAP Technologies Used:

SAP ECC 6.0	Live
-------------	------

Server Processor: Unknown

Linux Distribution: Unknown



Emerging Technologies and Use Cases

The following Emerging Technologies and use-cases are part of the project and describe the contribution

	Technology or Use Case	Yes/No	Contribution to Project
1.	Machine Learning / Artificial Intelligence	Yes	User-Intention-Prediction Algorithms
2.	IoT	No	
3.	3D printing	No	
4.	Blockchain	No	
5.	API Economy / Integrate the Intelligent Enterprise	Yes	Connection to SAPGUI and SAPUI5, using local and cloud parts
6.	Cloud Native / Event Based Architectures	No	
7.	Extending the digital core with SAP CP / ABAP in SAP CP	NO	
8.	SAP Leonardo Application (extending SAP application, using Industry Innovation Kits or result of Design Thinking workshop)	Yes	Controlling SAP elements (e.g. buttons, input fields) to be triggered hands-free or to be set as intended element for triggering with “keyboard click”