

AFRY Real Digital Twin

ACCELERATE YOUR BUSINESS BY USING AFRY REAL DIGITAL TWIN

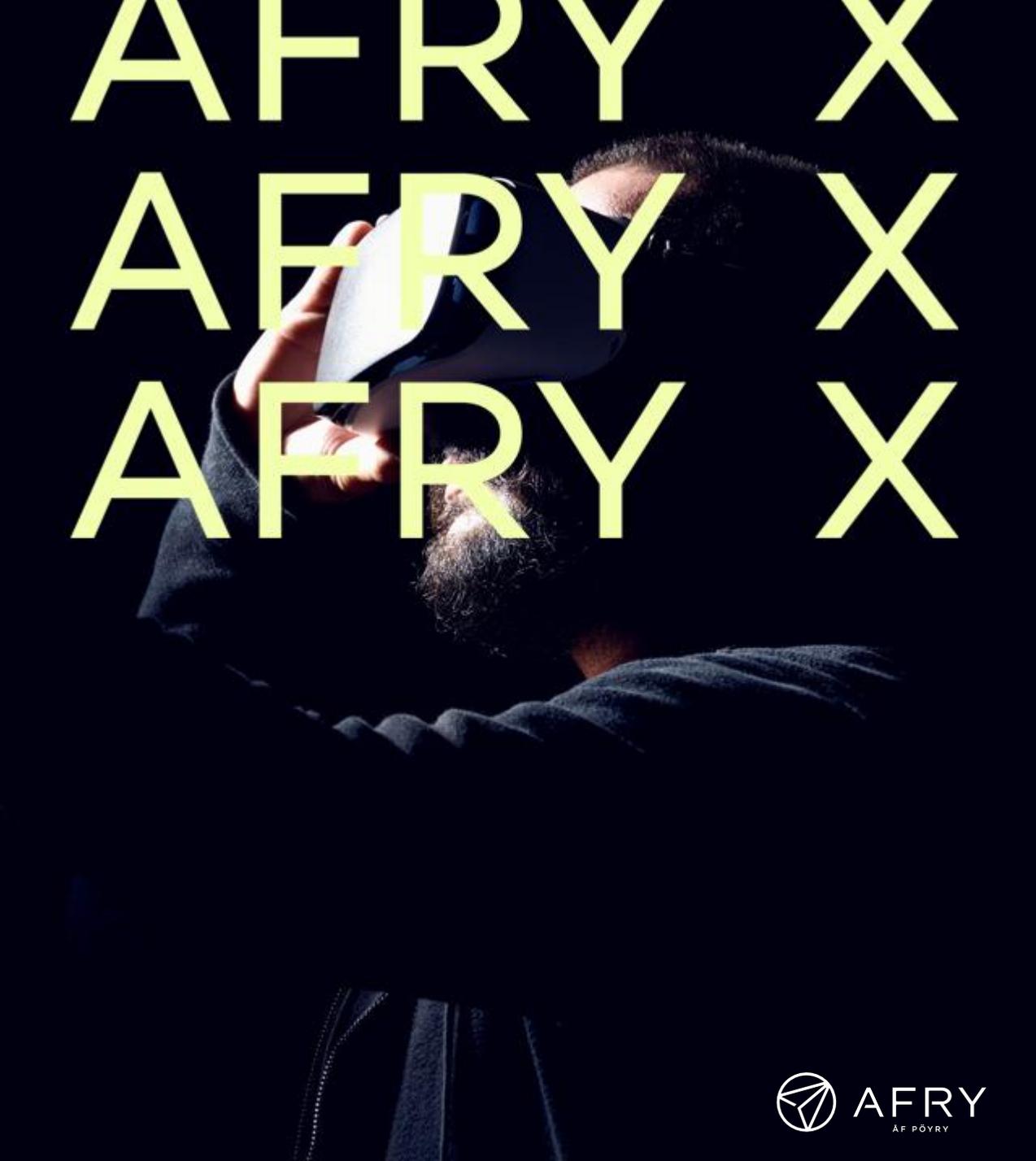
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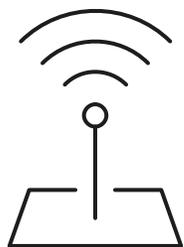
AFRY Real Digital Twin creates an exact digital twin of any production, by emulating plant modifications in a 100% accurate digital copy on signal level of the production environment. This results in elimination of unnecessary downtime during commissioning and ramp up. This technology is a Game Changer as it gives the industry the opportunity to build, test and verify production equipment before its physically available.

AFRY Real Digital Twin uses established protocols and technologies in combination with AFRY's libraries to allow integration of most automation equipment, control systems and supervisory systems independent from supplier and application. AFRY Real Digital Twin has been applied to industries such as automotive, water treatment, pulp & paper, and others.

AFRY X
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A person with a beard is wearing a VR headset, looking into it. The background is dark. Overlaid on the image are three rows of the text 'AFRY X' in a large, bold, yellow font. The person's hands are visible, holding the VR headset.

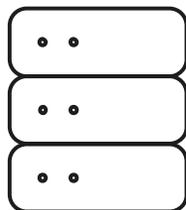
Why use AFRY Real Digital Twin?



Real time data

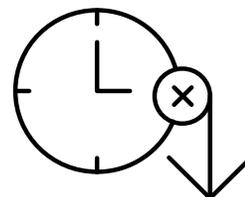
We create virtual Industrial IoT data!

By creating an exact digital replica of your production system including all HW or processes (machines, sensors and actuators)



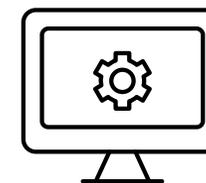
Quality insurance

It enables control of the physical systems by **emulating** plant modifications **in a 100% accurate digital copy** of your production environment before making changes to the actual plant



Reduced time & cost

Run 100% of operational testing without production stops when building or modifying a plant, which **eliminates unnecessary downtime** (both planned and unplanned) during commissioning and ramp-up



Minimize risk

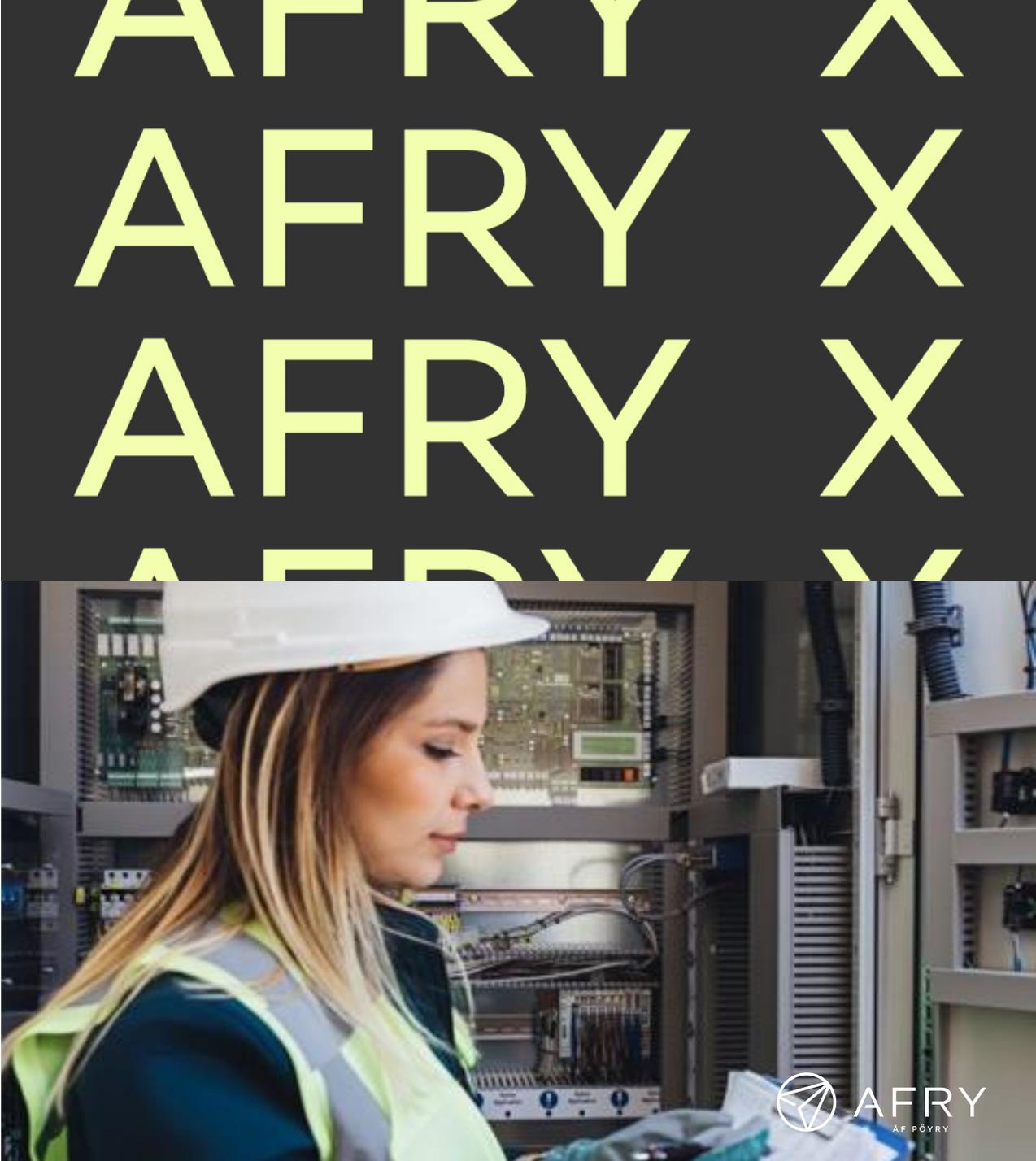
For customers who want to **build new, change** or **connect** their production environment

RDT technology is **independent** and connects solutions from different brands and suppliers

AFRY REAL DIGITAL TWIN

AFRY X Real Digital Twin: Capabilities & Benefits

"AFRY RDT provides an exact digital replica of your production system which behaves and generates data identically to the physical twin. This emulated digital twin provides a range of capabilities and benefits"



AFRY X Real Digital Twin: Capabilities & Benefits

CAPABILITIES	BENEFITS
Virtual Commissioning <ol style="list-style-type: none"> 1. Test multiple subsystems combined rather than separate 2. Virtual FAT 3. Quality assurance 	<ul style="list-style-type: none"> – Reduce commissioning and ramp up time up to 75% – Minimise technical and economical risks
Training <ol style="list-style-type: none"> 1. Train operators on an exact system emulation 2. Provide immersive virtual reality-based training 	<ul style="list-style-type: none"> – Realistic operator training and visualisation – Stress tests without real consequences
Optimise Production Processes <ol style="list-style-type: none"> 1. Improve OEE by detailed emulation and analyses 2. Maintenance & trouble shooting support 3. Test bed for AI integration, generating industrial IoT data 4. Stress test OT software 	<ul style="list-style-type: none"> – Re-create issues/problems virtually – Find solutions with RDT testbed – Generate virtual data for future implementation – Predict behavior and performance
Virtual Design Support <ol style="list-style-type: none"> 1. Create accurate technical specifications for project & procurement purposes 2. Use virtual hardware designs to provide feedback to R&D teams 3. Accurate emulated test bed for OT/IT integration (SCADA, MES, IT) 	<ul style="list-style-type: none"> – Enable Agile WoW – Shortens total project time & cost – Assures the productions digital compatibility



An aerial photograph of a vast solar farm. The solar panels are arranged in neat, parallel rows that stretch across a dry, brown landscape. The perspective is from a high angle, looking down at the panels, which are tilted towards the sun. The overall scene conveys a sense of large-scale renewable energy production.

Making Future