

NIDays



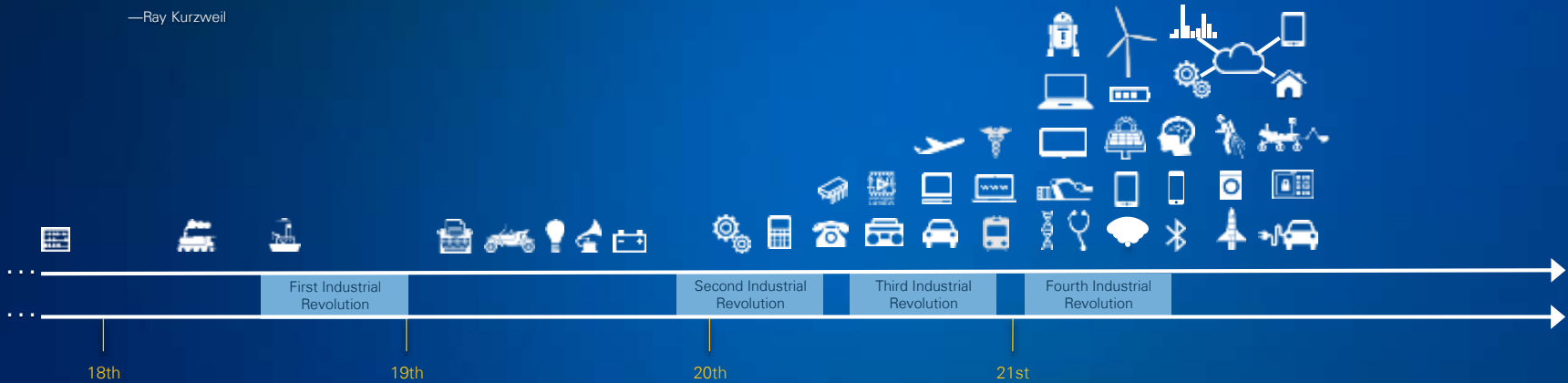


“Progress in the 21st century will proceed at rates

1000 times

greater than the 20th century.”

—Ray Kurzweil



The Engineering Grand Challenges



Health



Sustainability

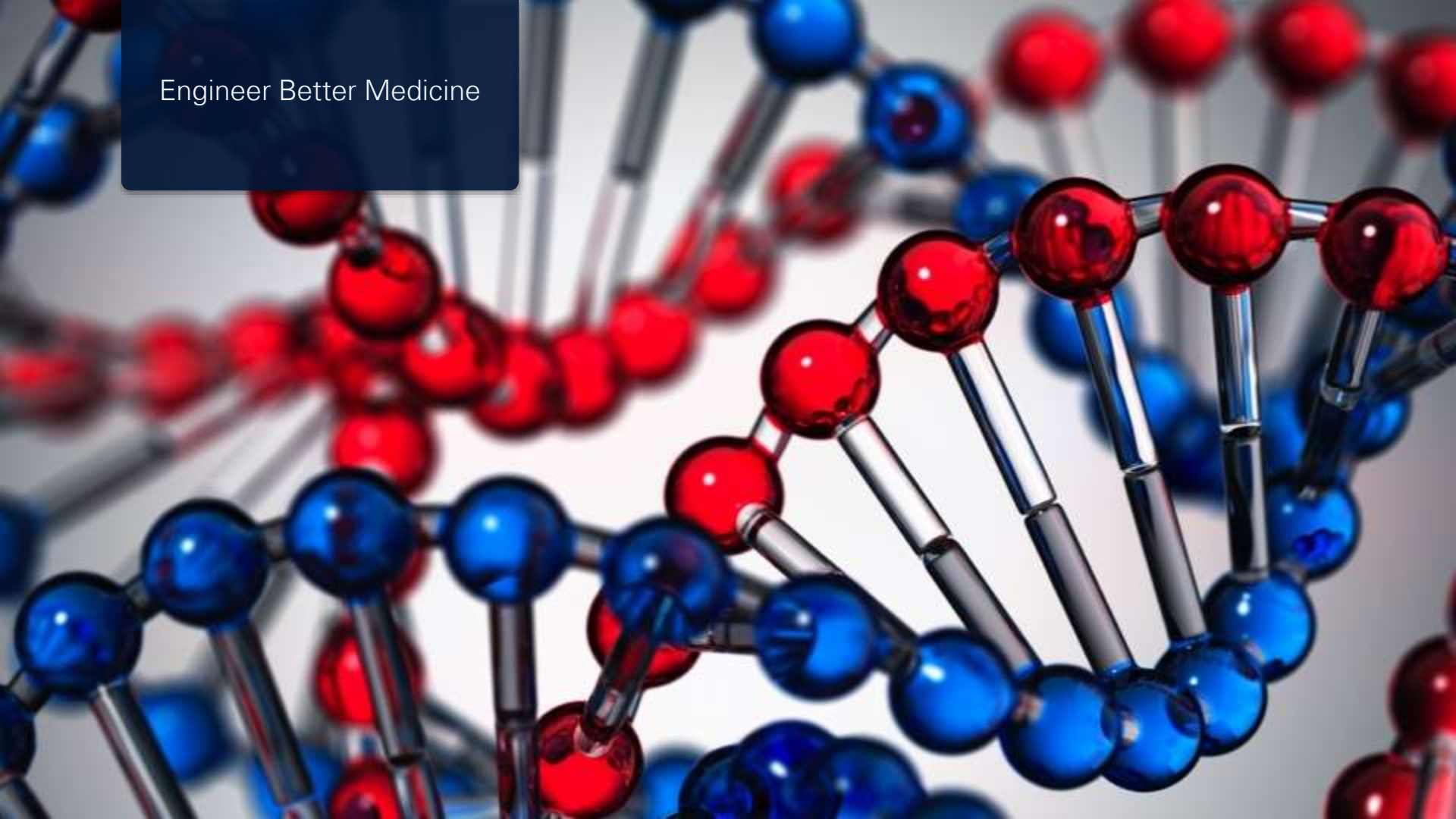


Security



Joy of Living

Engineer Better Medicine

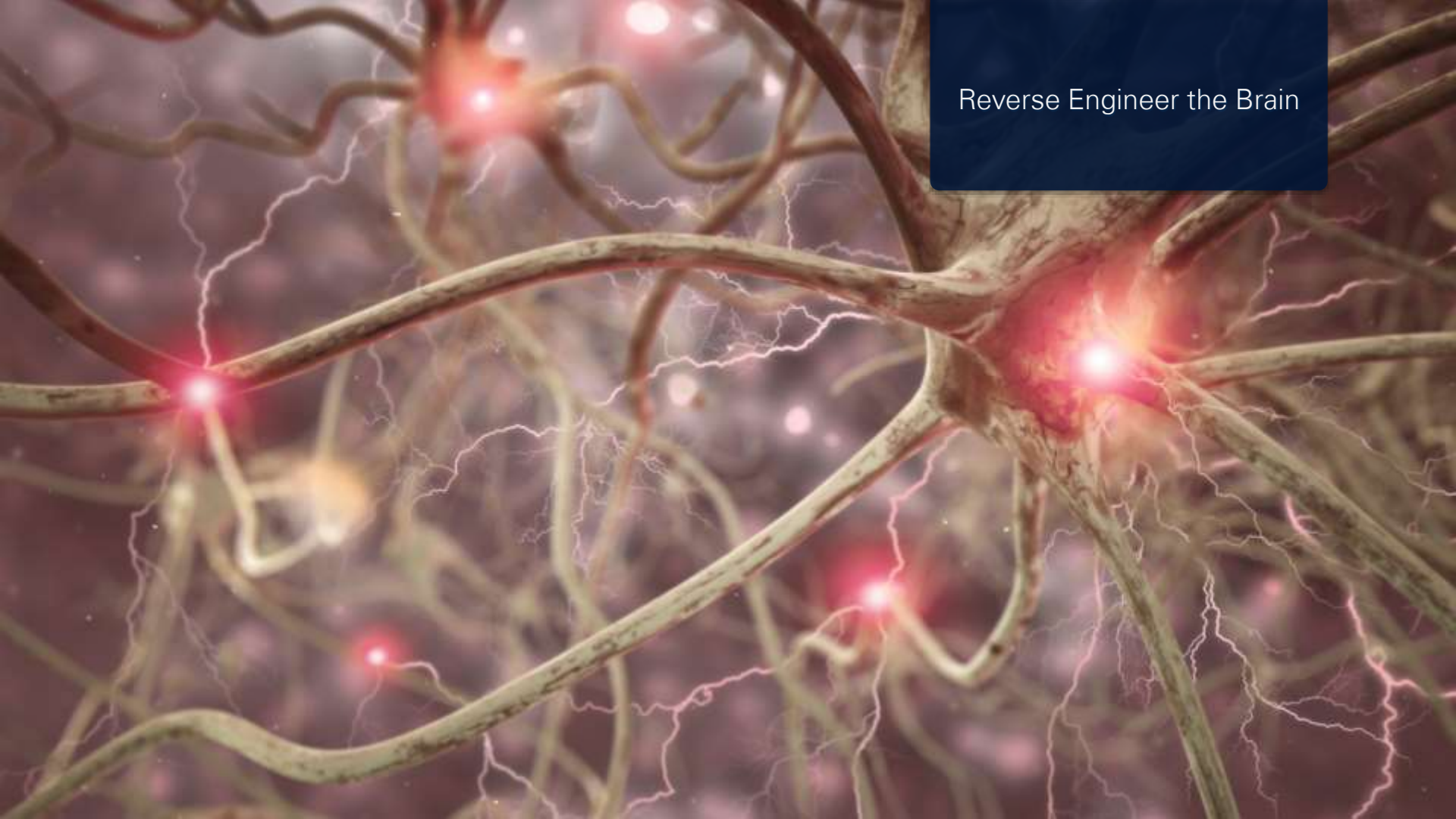


A wide-angle, fisheye photograph looking down the central column of a tokamak fusion reactor. The central column is composed of several vertical, segmented metallic structures. The walls of the reactor are made of numerous curved, metallic tiles. On the left side, a large, complex mechanical arm or manipulator is visible, extending into the central column. The overall scene is highly technical and industrial, with various pipes, cables, and structural elements visible throughout the chamber.

Provide Energy from Fusion

Restore and Improve
Urban Infrastructure





Reverse Engineer the Brain



Health



Sustainability



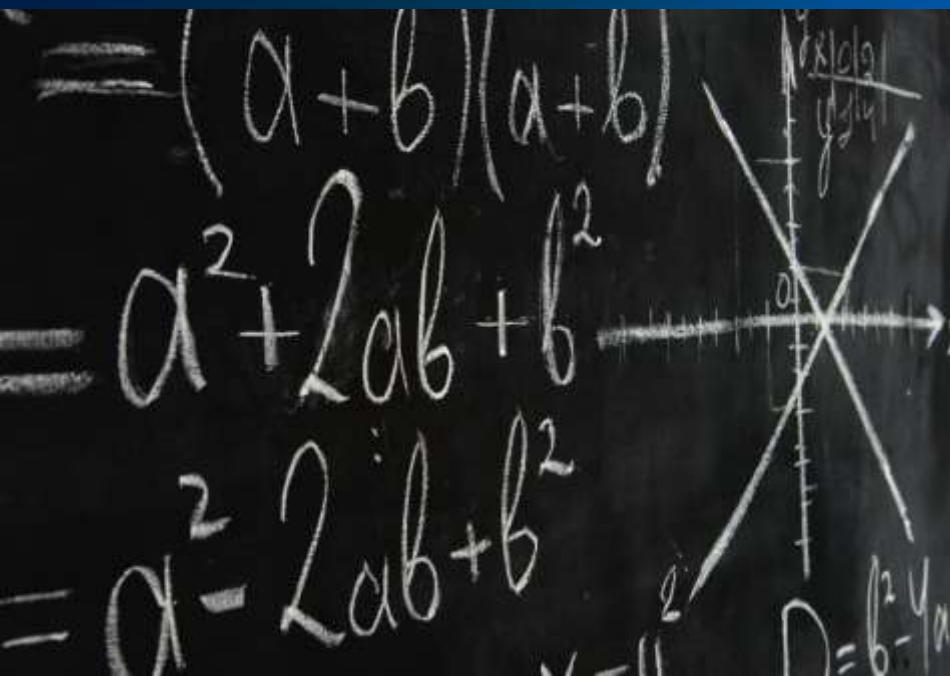
Security



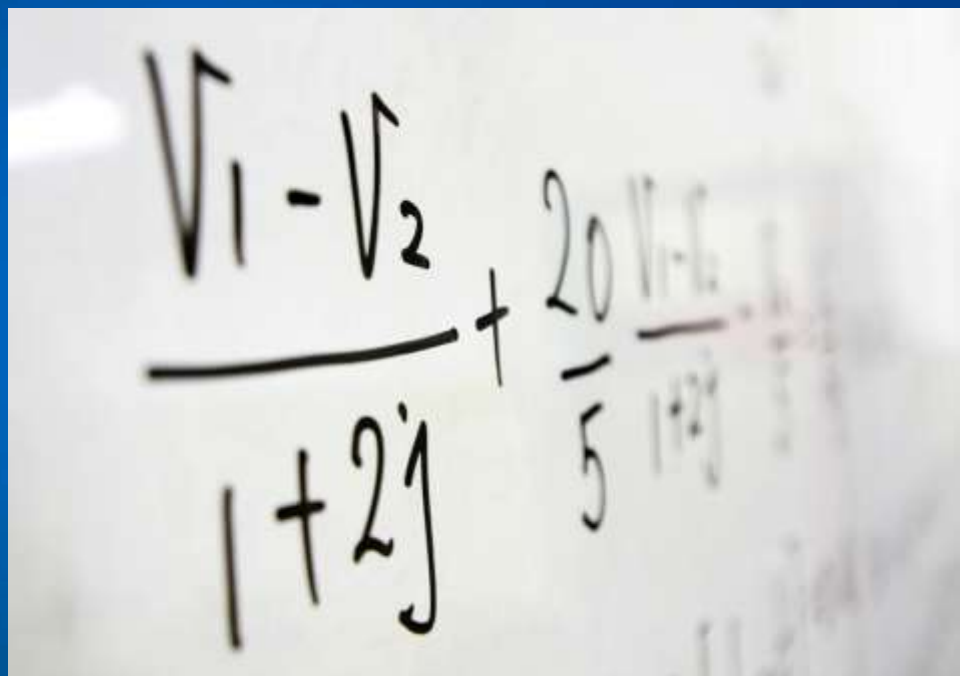
Joy of Living



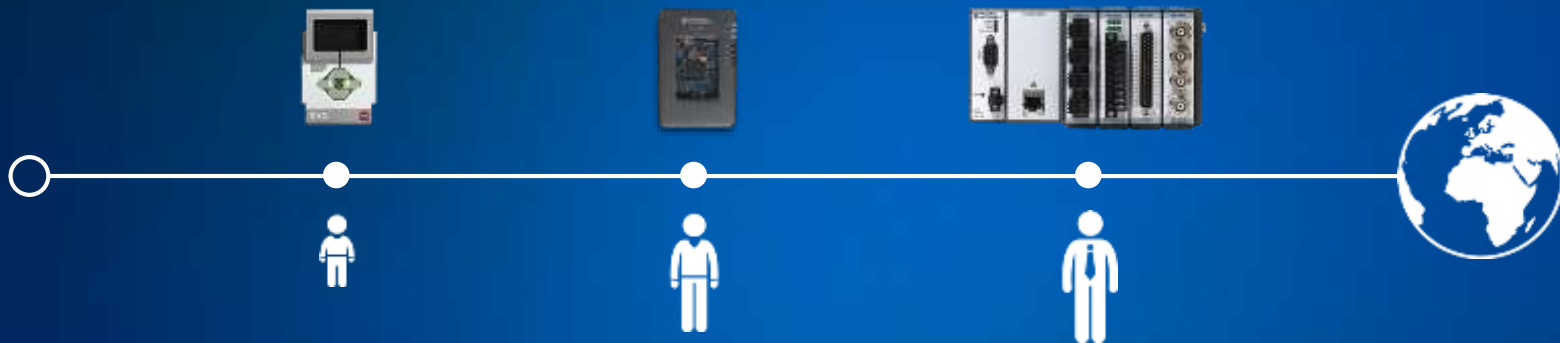


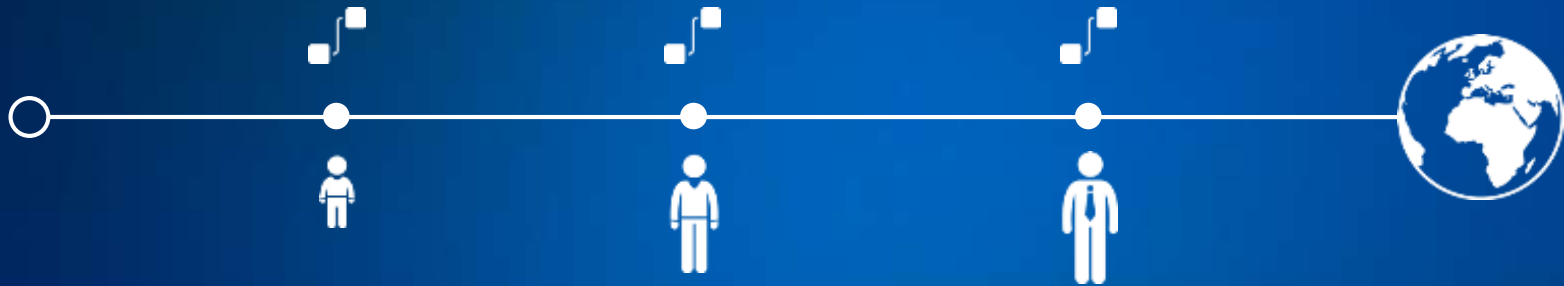
$$\begin{aligned}
 &= (a+b)(a+b) \\
 &= a^2 + 2ab + b^2 \\
 &= a^2 - 2ab + b^2
 \end{aligned}$$


The image shows a chalkboard with three lines of algebraic identities written in white chalk. The first line is $= (a+b)(a+b)$, the second is $= a^2 + 2ab + b^2$, and the third is $= a^2 - 2ab + b^2$. To the right of the text is a coordinate system with x and y axes. Two lines are drawn on the graph: one with a positive slope and one with a negative slope, intersecting at the origin. There are some faint markings and labels on the graph, including 'x', 'y', and 'D = b^2 - 4ac'.

$$\frac{V_1 - V_2}{1 + 2j} + \frac{20}{5} \frac{V_1 - V_2}{1 + 2j}$$


The image shows a whiteboard with a complex equation written in black marker. The equation is $\frac{V_1 - V_2}{1 + 2j} + \frac{20}{5} \frac{V_1 - V_2}{1 + 2j}$. The background is slightly blurred, showing other parts of the whiteboard.











SREB | Advanced
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EDUCATION

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UNIVERSITY

WRO™
World Robot Olympiad

PROJECT LEAD THE WAY
PLTW

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INCORPORATED

THE INFINITY PROJECT

4,000,000
Future System Designers

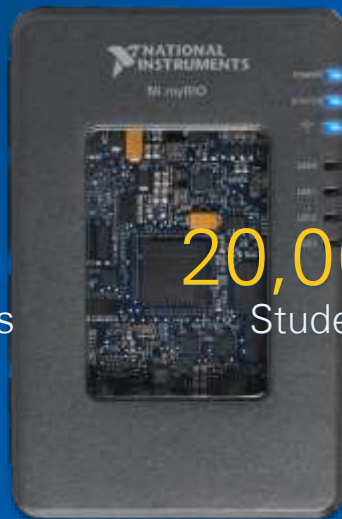


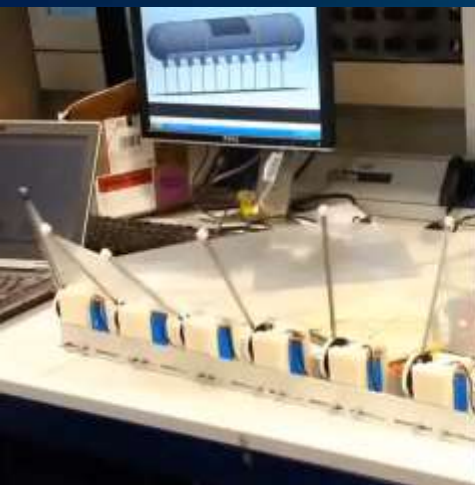
65+
Countries

800+
Universities

20,000+
Students

13
New LabVIEW Tools
Network Apps





→→→ **STUDENT DESIGN COMPETITION**



A stylized world map in a light blue color, centered on the Atlantic Ocean, serving as a background for the statistics.

3,250
Teams

25
Countries

3
Finalists

NASA Student Launch Project

UNC Charlotte, USA



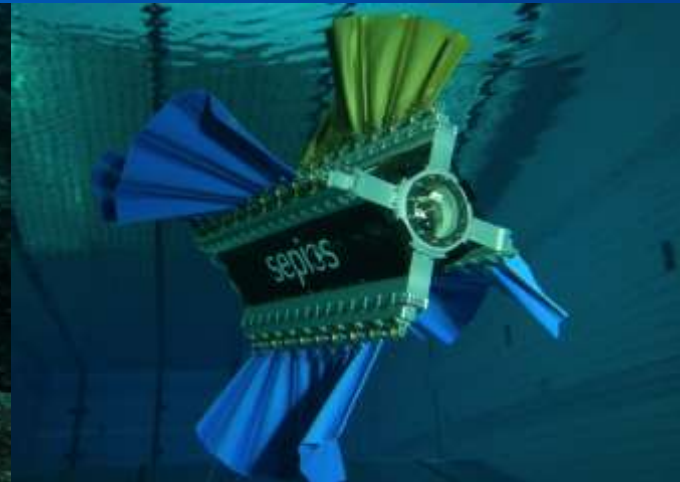
EureCar

KAIST, Republic of Korea



Sepios

ETH Zurich, Switzerland





36 rays actuated
by individual servos

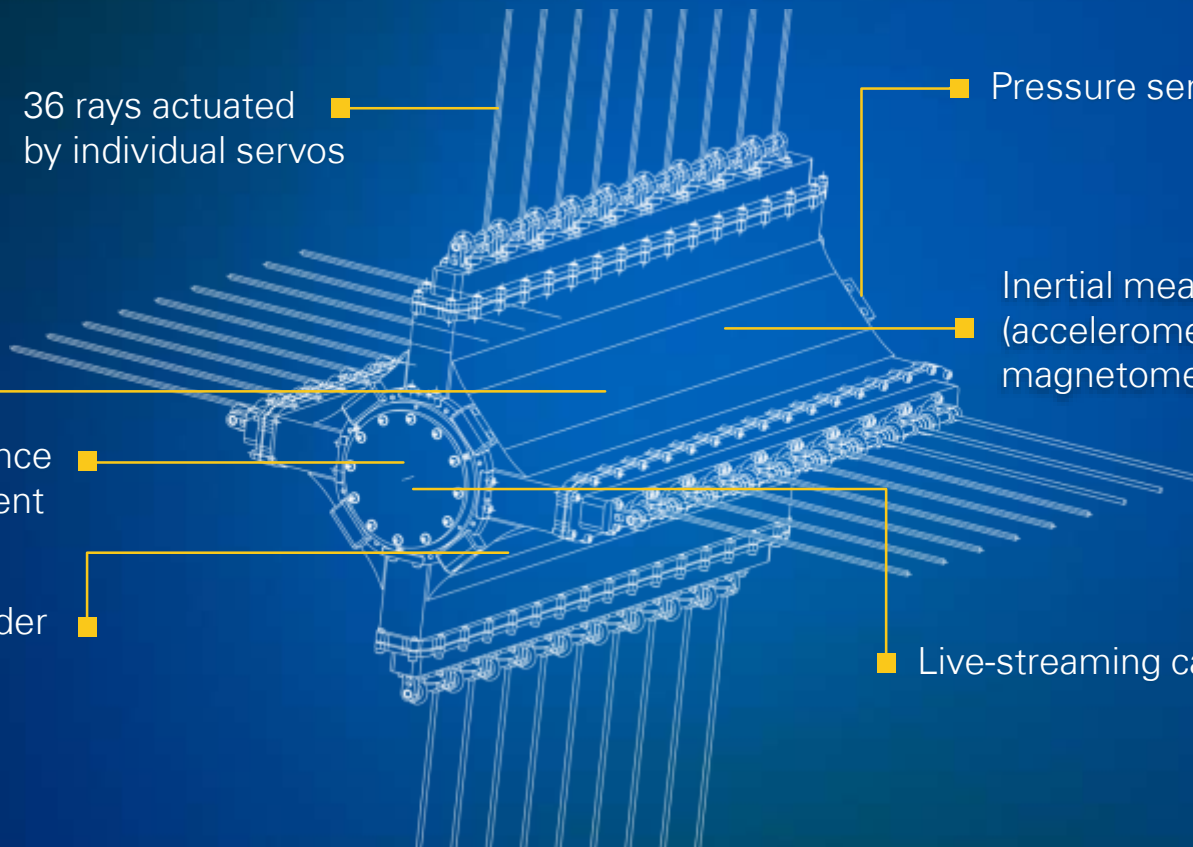
Pressure sensor

Inertial measurement unit
(accelerometer, gyroscope,
magnetometer)

Laser distance
measurement

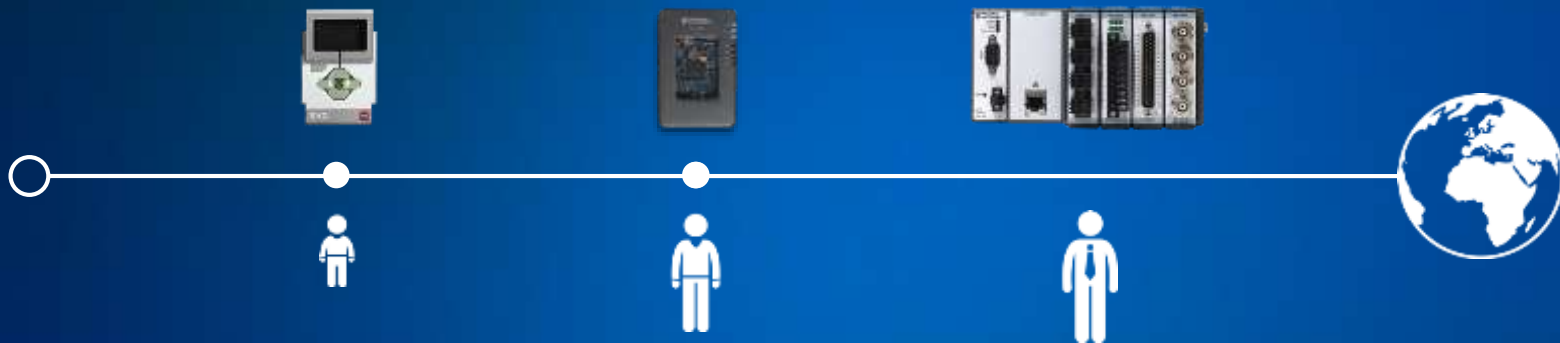
Swim bladder

Live-streaming camera













Smart
Tools



Intelligent
Communication



Industrial
Robots



Smart
Inspection



Mobile
Manipulator





Airbus Technology Store



Vision



Filter



Input/Output



Motion

IP and Algorithm Library



SOM



sbRIO



CompactRIO



PXI

NI Hardware

400,000+ Hole Locations
1,000+ Tightening Tools
Increase Quality Assurance





Airbus Technology Store



Vision



Filter



Input/Output



Motion

IP and Algorithm Library



SOM



sbRIO



CompactRIO



PXI

NI Hardware



Inspection
Input



Control
Output





Inspection
Input



NI SOM



Control
Output



Airbus Open Robot Interface



Mobile Robot



Industrial Robot



Humanoid Robot



Airbus Technology Store



Vision



Filter



Input/Output



Motion

IP and Algorithm Library



SOM



sbRIO



CompactRIO



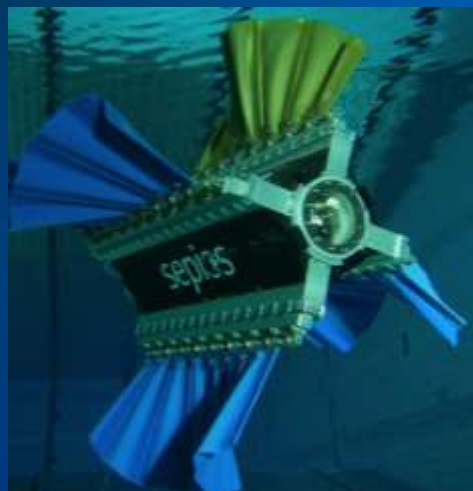
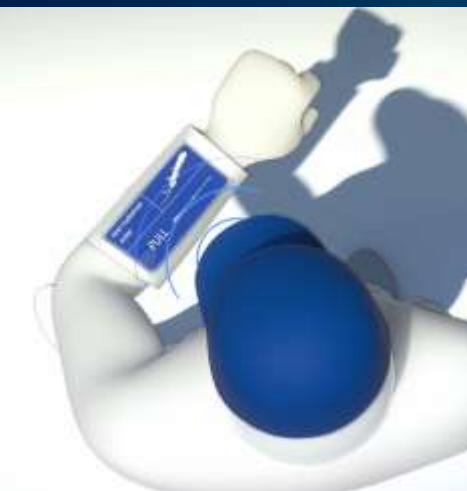
PXI

NI Hardware

Platform-Based Approach

10X Reduction
Development Time





NIDays

