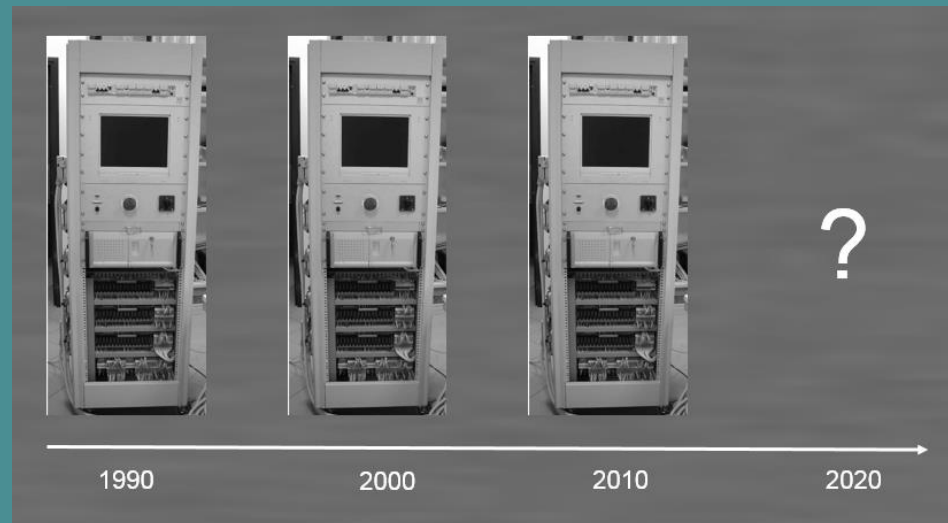




SPS IPC Drives Italia 2017

Test revolution in manufacturing: how enabling technology are changing the appearance and the soul of test workstation

G. Bondani, G. Bacchiega – IRS srl
M. Bambini - National Instruments



IRS Ingegneria
Ricerca
Sistemi

**NATIONAL
INSTRUMENTS™**



Since more than 30 years test systems look the same



?

1990

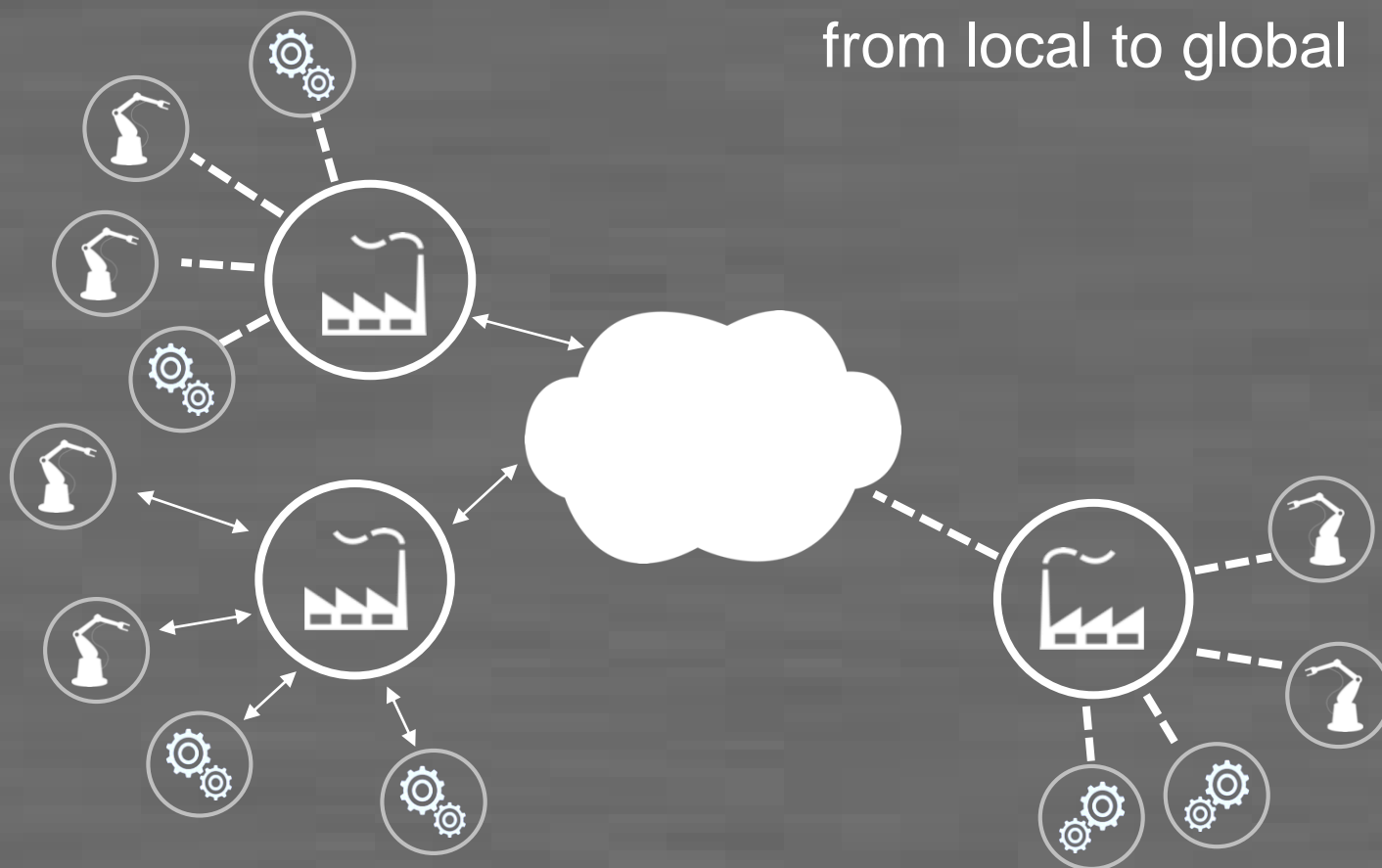
2000

2010

2020

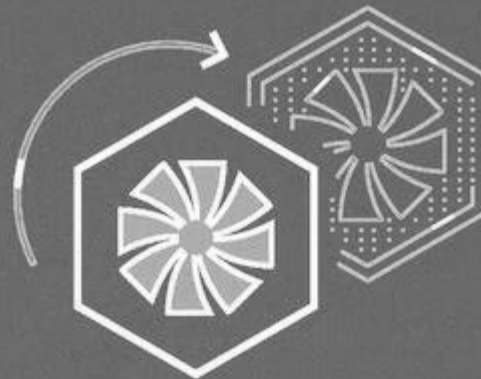


from local to global

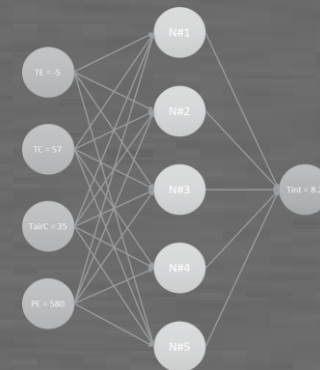




from dumb to smart



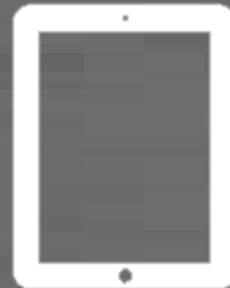
digital twin



deep learning

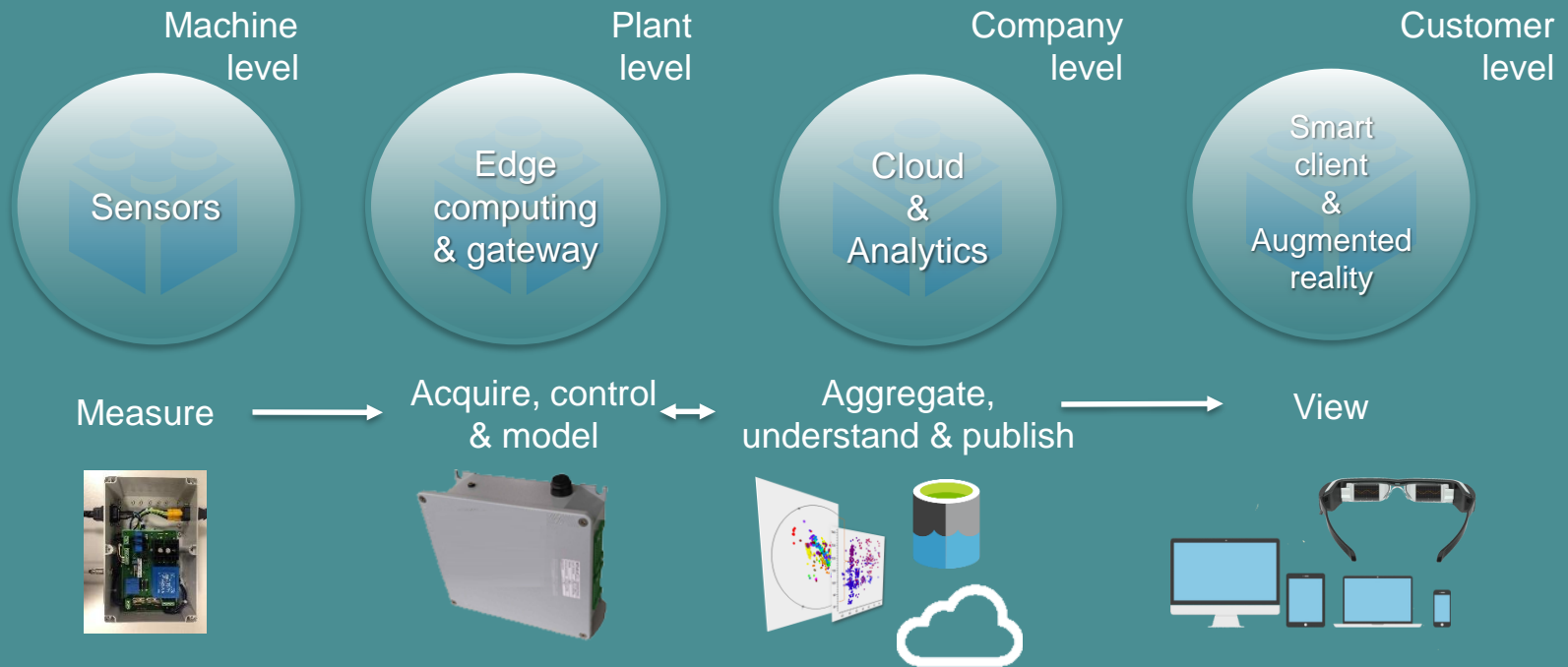


from mono-interface
to multi-interface



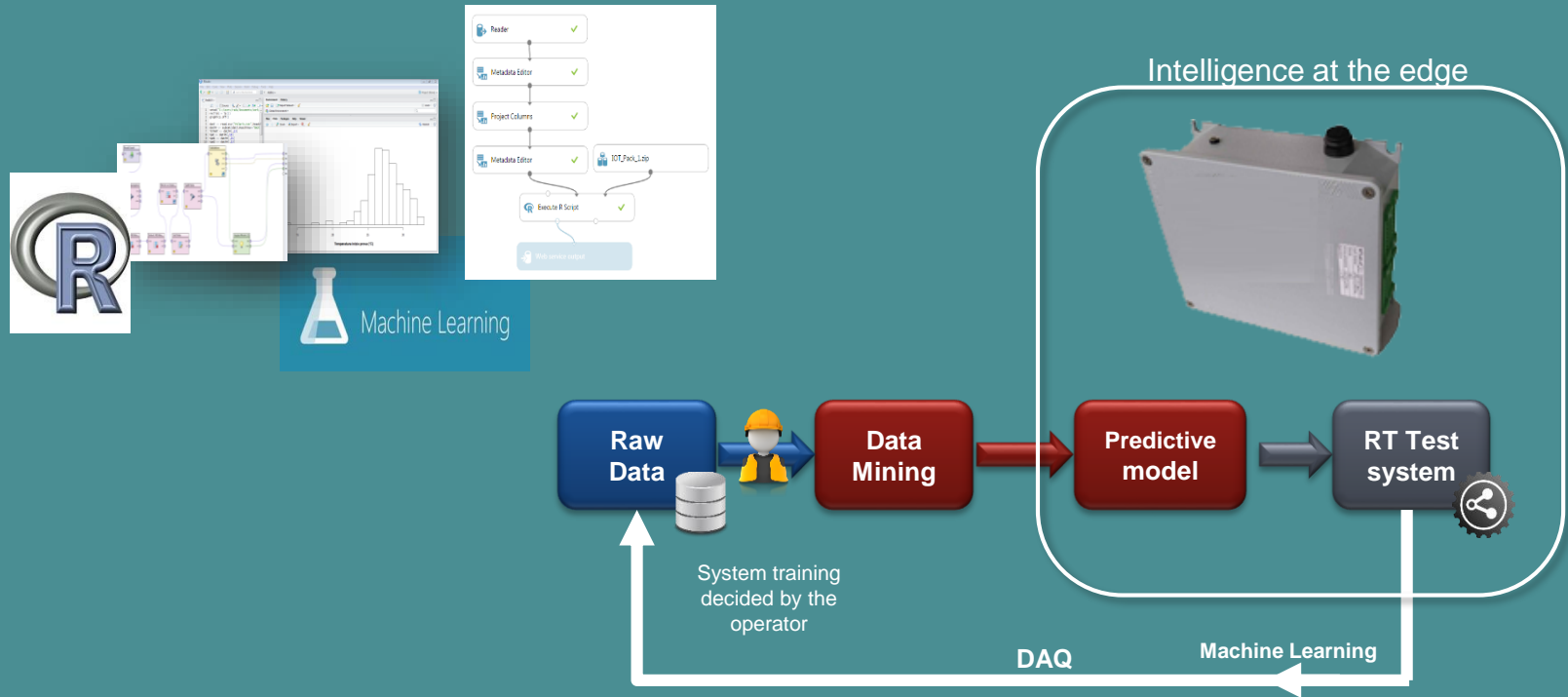


Test system become global



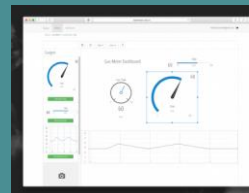
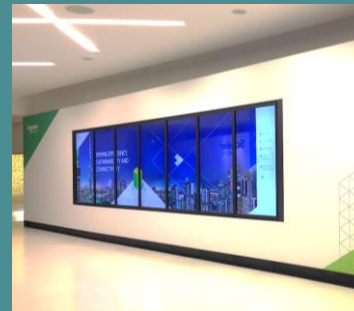


Test system become smart





Test system become multi-interface



Online Visualization.
Online Data Analysis.
Any Browser.
Any Platform.
Anywhere.





Application example





Italian “Industrie 4.0” National Plan



It's the right moment to
change



Specific financement for test and measurement in Italian plan



1 Beni strumentali il cui funzionamento è controllato da sistemi computerizzati o gestito tramite opportuni sensori e azionamenti;



2 Sistemi per l'assicurazione della qualità e della sostenibilità;



3 Dispositivi per l'interazione uomo macchina e per il miglioramento dell'ergonomia e della sicurezza del posto di lavoro in logica «4.0».



Conclusion

**Automated Test Revolution
a change
in appearance and soul of test workstation**