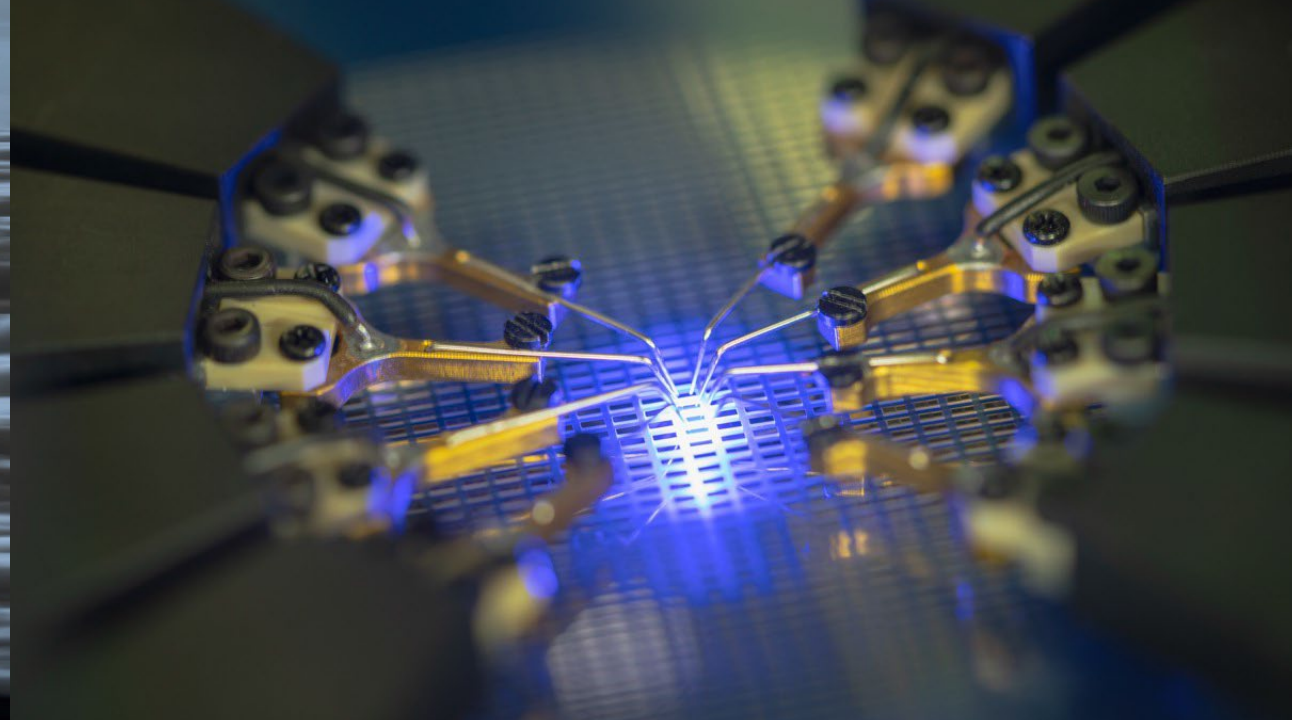
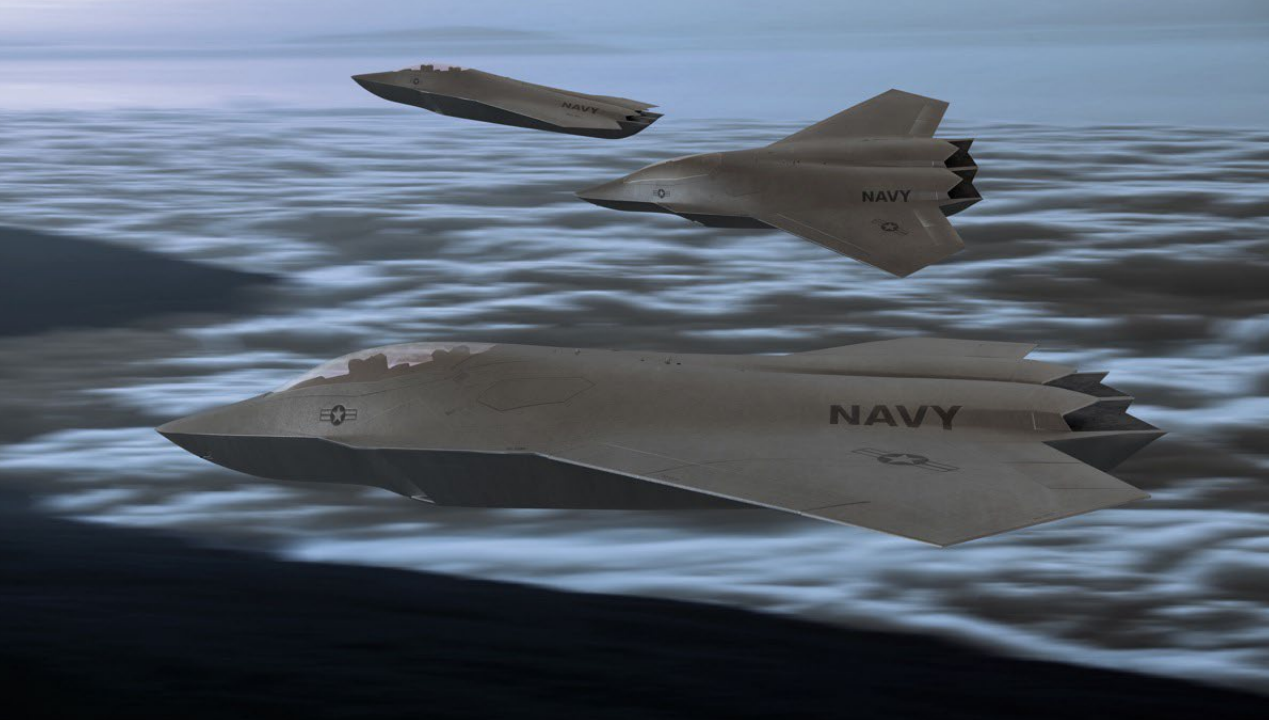


# Leverage Intelligent Test to Solve Business Challenges

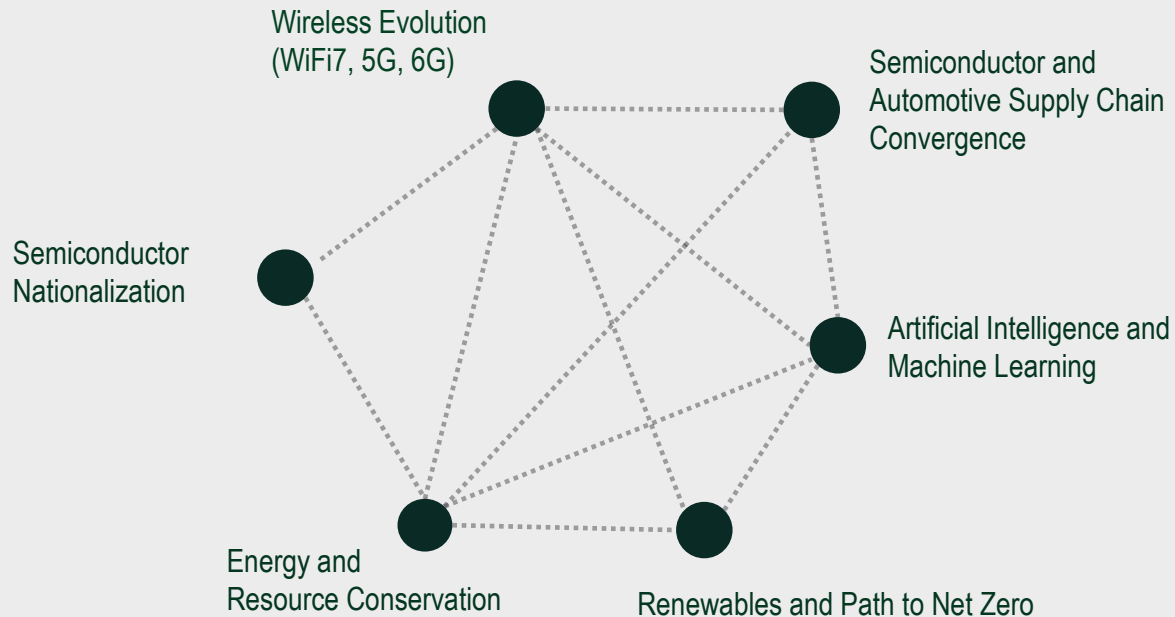




# Macro Trends Create Challenges and Opportunities

Organizations Must Rethink Product Innovation or Risk Falling Behind

## Intertwined Industry Growth Drivers Drive New Requirements



## Business Challenges



Increased product complexities require advanced development methods.



New standards drive technical innovation and demanding product requirements.

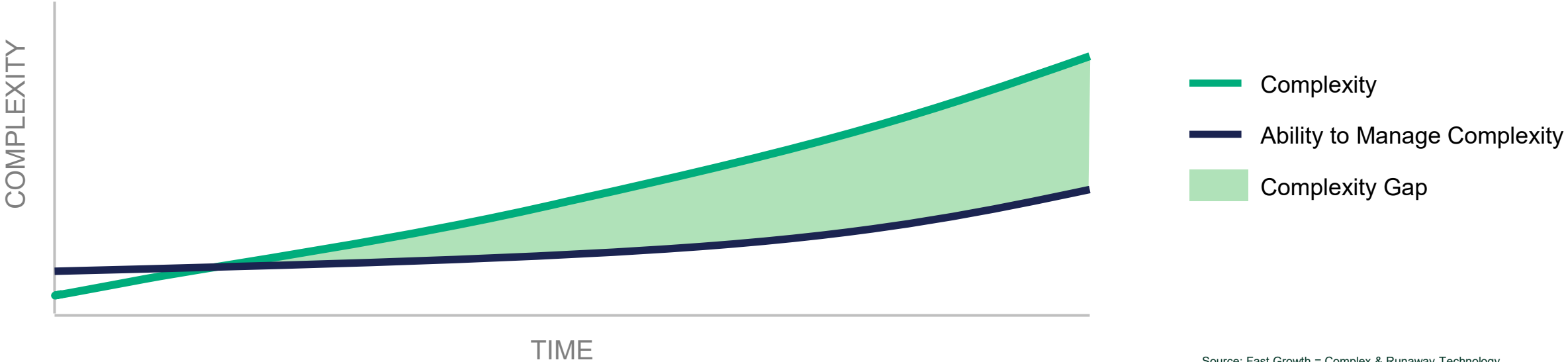


Supply chains are evolving, requiring new business models.

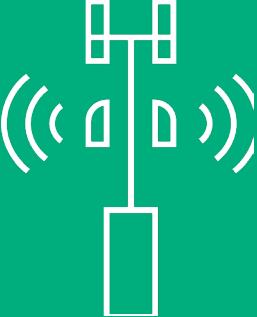
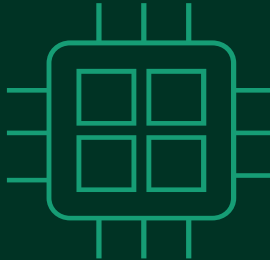


Sustainability goals create the need to reduce energy consumption and waste.

# DUT Complexity over Time



Source: Fast Growth = Complex & Runaway Technology  
[point.Co/the-it-complexity-gap/](http://point.Co/the-it-complexity-gap/)

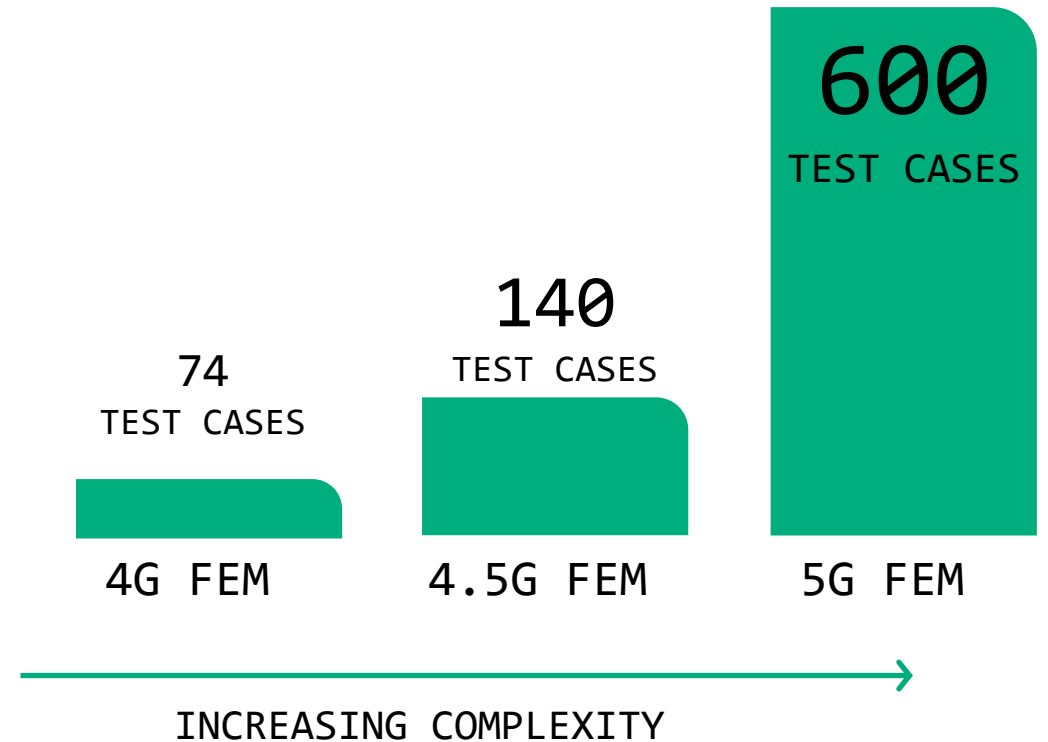


# 5G Introduces Step Function in Device Complexity

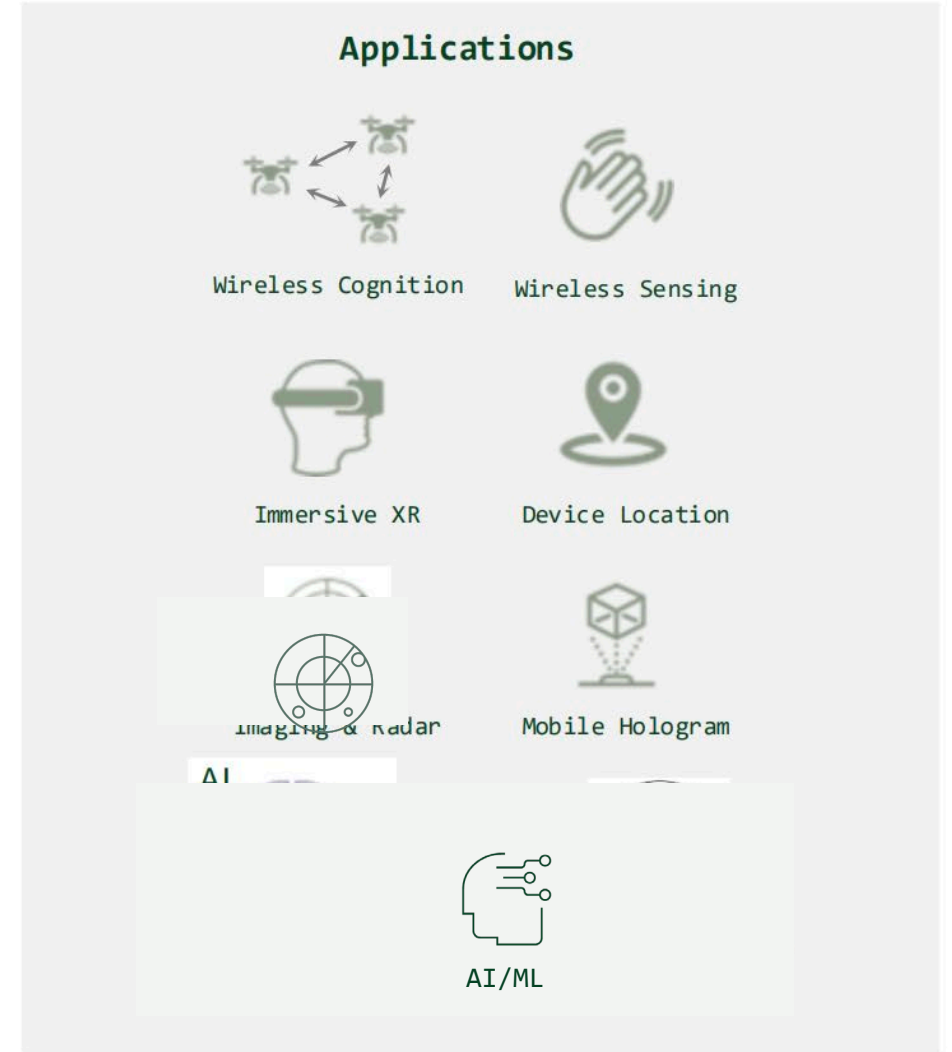
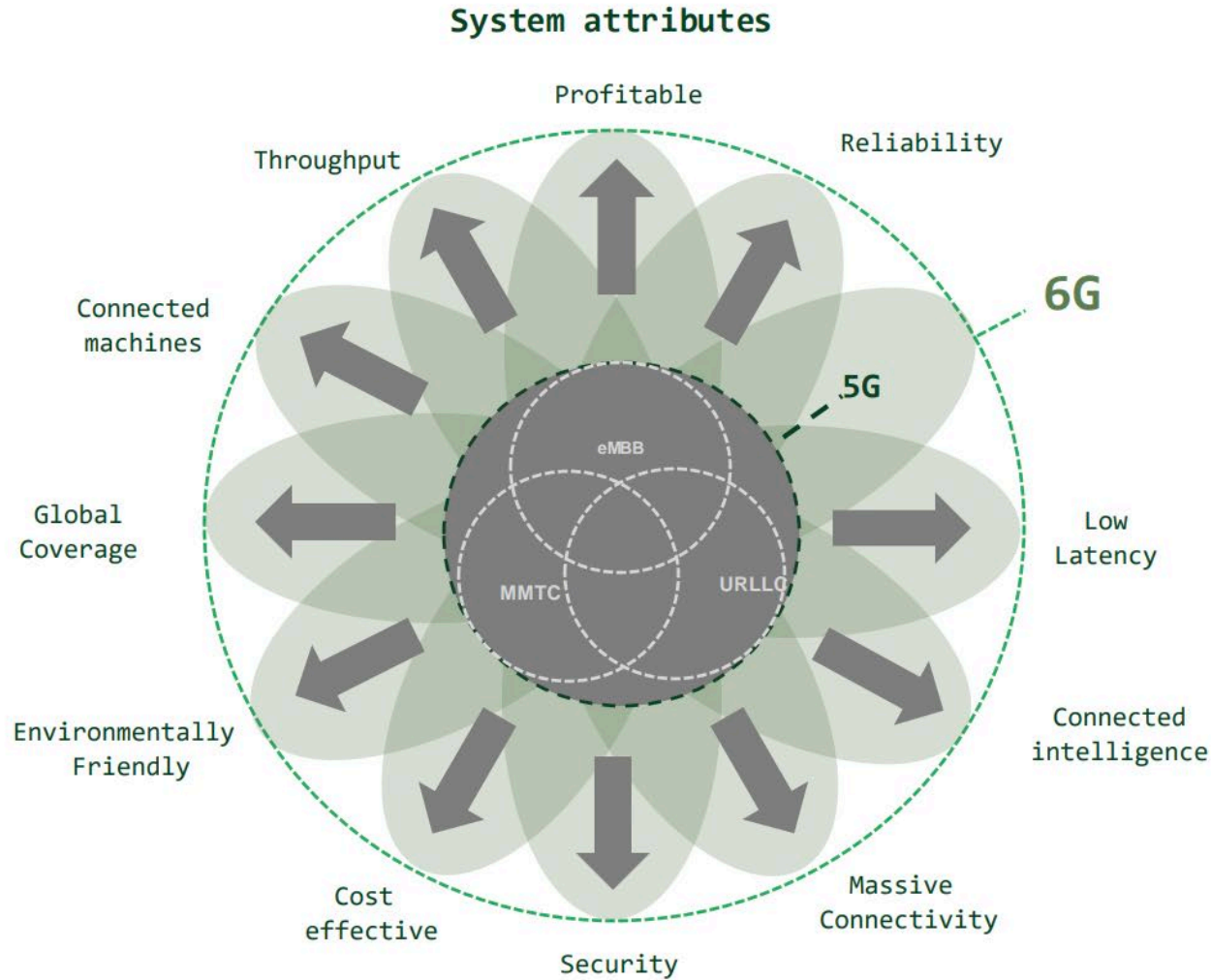
## 5G Implications

8 NEW BANDS	2X UPLINK CHANNELS
5X CARRIER BANDWIDTH	2X MORE WAVEFORMS
350% CARRIER AGGREGATION COMBINATIONS	2X MORE MODULATIONS

## 5G MOBILE RF FEM TEST CASES



# The 6G Vision: An intelligent network interconnecting intelligent people and intelligent machines, anytime, anywhere





# Test Needs to Evolve

## 57%

of respondents fear their production processes are outdated and cannot keep up with new business and technology trends

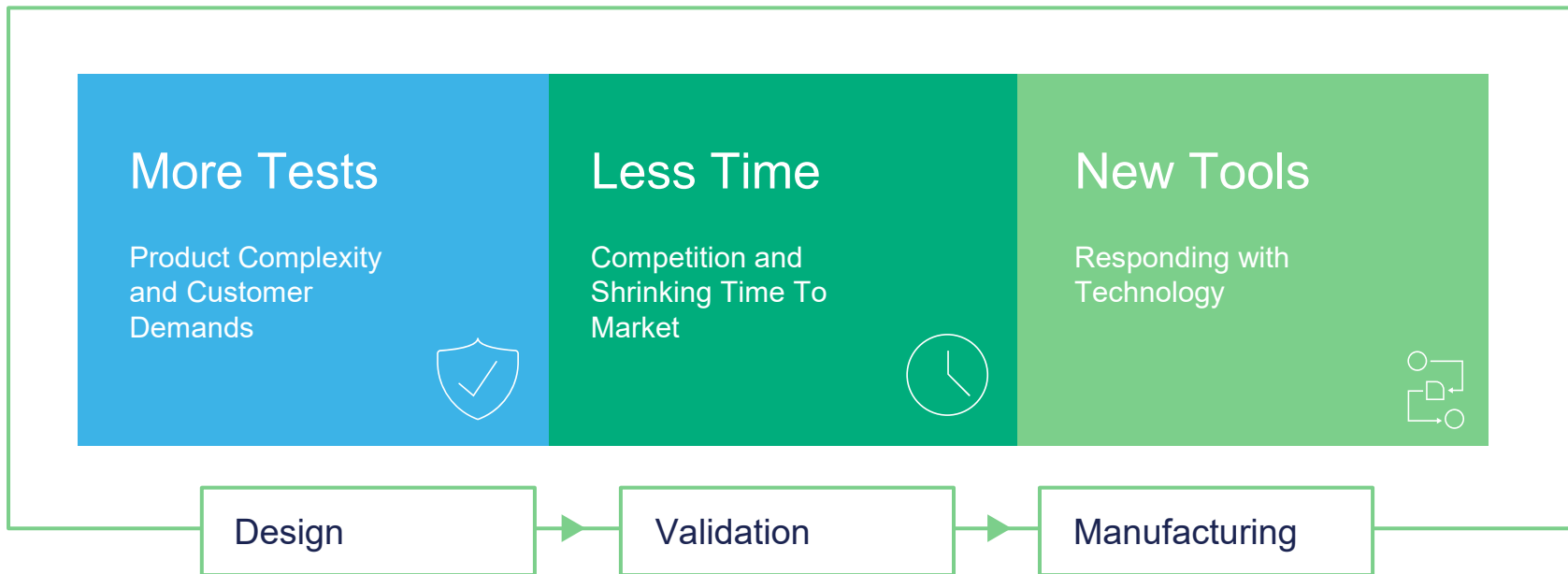
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## 46%

say they will lose market share within two years unless they make significant changes to product lifecycle processes

# Test Needs to Evolve

## Product Lifecycle





# Where Can AI Help?

## Validation

Get Requirements

Develop Test Plan

Set Preliminary  
Test Limits

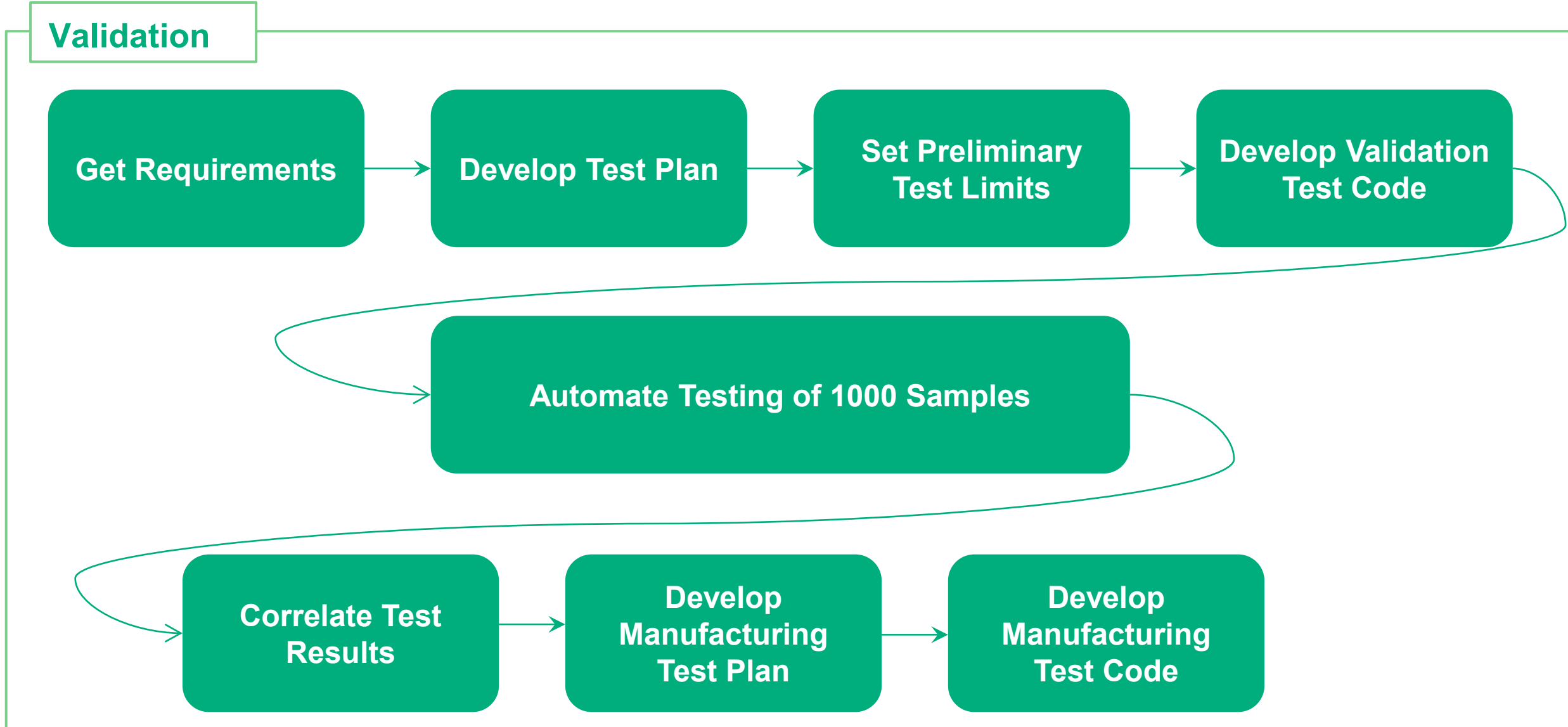
Develop Validation  
Test Code

Automate Testing of 1000 Samples

Correlate Test  
Results

Develop  
Manufacturing  
Test Plan

Develop  
Manufacturing  
Test Code



# Intelligence

**REASON**

**LEARN**

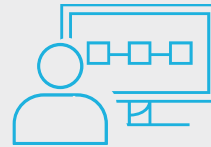
**IMPROVE  
OUTCOMES**

# Intelligent Test



## INSTRUMENT INTELLIGENCE

- Advanced Measurements
- Real-Time Signal Insights
- Adaptive Test Sequences



## USER INTELLIGENCE

- Accelerated Workflow
- Optimized Test Planning
- Rapid Analysis and Reporting



## ENTERPRISE INTELLIGENCE

- Improved Asset Utilization
- Increased Yield and Quality
- Enhanced Product Lifecycle Insights

# Foundational Principles of AI Test & Measurement



**EXPERT  
LED**

Human-Centric  
Collaborative  
Adaptable



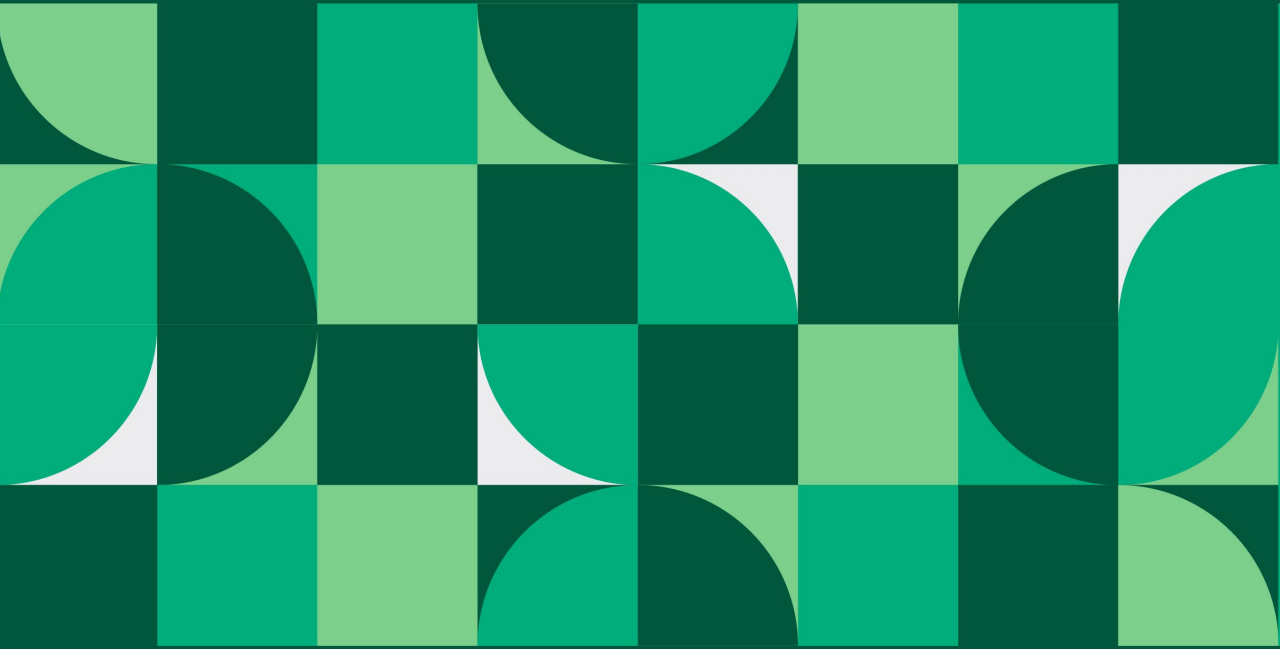
**AI-  
ENHANCED**

Accelerated  
Seamless  
Accessible



**INDUSTRY  
READY**

Secure  
Transparent  
Traceable



NI is now part of Emerson.