

Siemens Digital Industries Software

# Integrate excellence into all your devices

Harness the complexity of integrated, multi-disciplinary product design for optimized devices with Siemens Design Excellence.

## Trends



### Market Pressure

Increasing competitive pressure challenging product development to become more efficient while maintaining compliance.

#### Implications

Manufacturers must control development costs and timelines to be competitive.

### Smart and Complex Devices

Design complexity is increasing in all domains as products become 'Smart' and 'Connected'.

#### Implications

Collaboration and data control platforms must facilitate control of complexity and maintain data/evidence integrity.



### Regulatory Scrutiny

The everchanging regulatory landscape is increasing the scope & scrutiny of medical device compliance.

#### Implications

Manufacturers must expect to show more of their design process and deliverables with ever greater transparency.



### Generating Evidence

The use of simulation technologies for virtual, digital performance testing of devices to produce evidence for decision support of Verification & Validation activities.

#### Implications

Simulation can be leveraged as competitive advantages for companies that choose to master this approach.

## Adoption of advanced technology, policy and regulatory compliance, and understanding consumer behavior are top issues impacting medtech companies

### Advances in technology

88%

### Policy and regulatory activity

63%

### Changes in consumer attitude, behaviors, and spending

63%

### Connected Devices

**+23%**  
compound annual growth rate

Estimated growth of wearable/connected medical devices through 2023

Source: Market Research Future

Source: Deloitte analysis

## Companies lack the digitalization across processes and teams necessary to address the challenges successfully

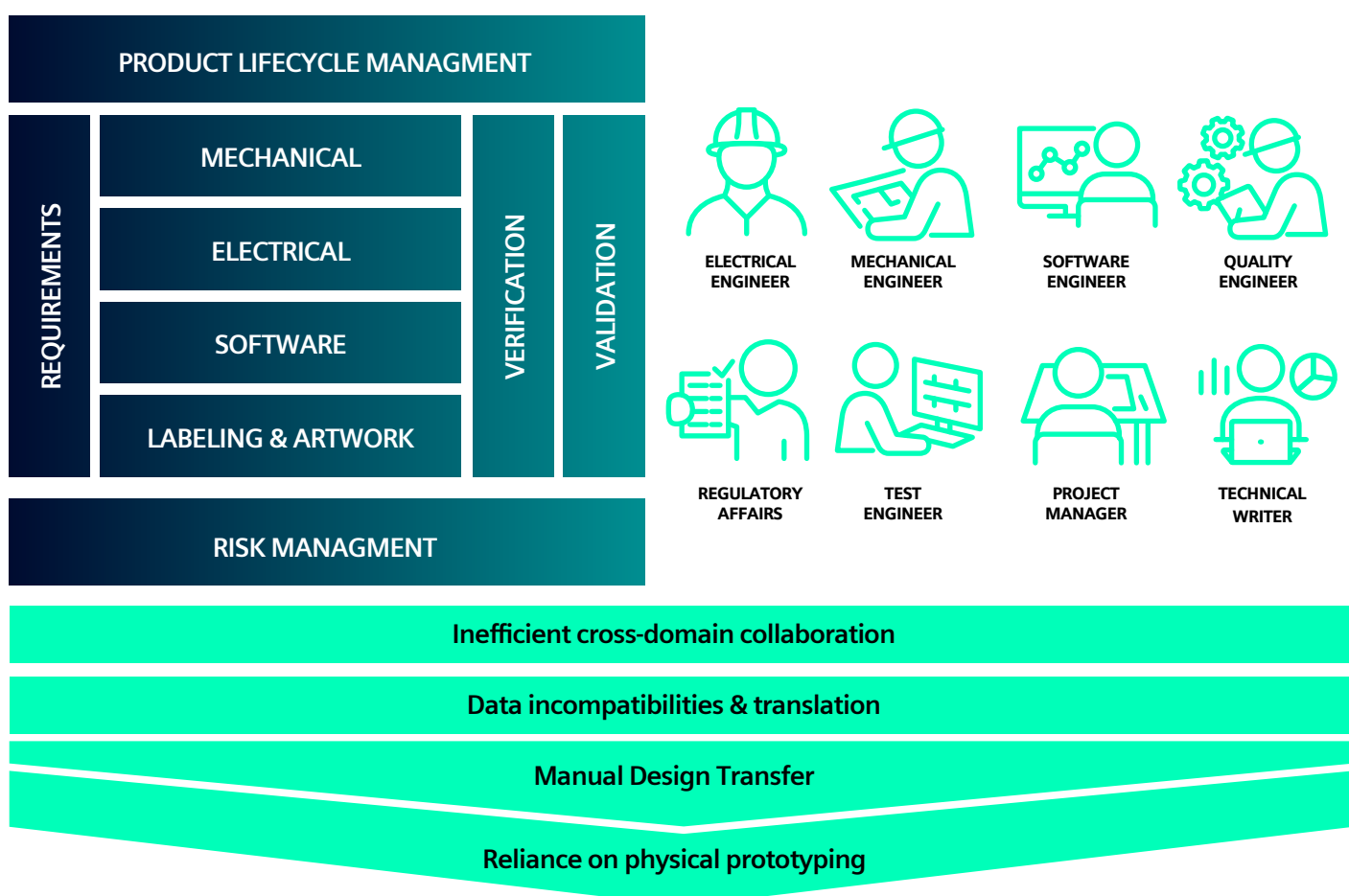


"Companies are investing in digital capabilities, but none rate themselves as digitally mature"

Deloitte



## Insufficient digital integration between medical device design domains



## Siloed data across disparate sources



**68%**

of corporations cite electronics, simulation and mechanical data synchronization as a significant product design challenge.



**26%**

of development time spent correcting data integrity errors.



**82%**

best-in-class companies are 82% more likely to utilize a process where electronic, mechanical, and simulation data are incrementally exchanged.

Source: Aberdeen Group, "Reducing Risk by Breaking Down Silos"

## How can you optimize design & performance of competitively differentiated, premium-value devices?

Design Excellence in your product development organization.

**Advanced Design & Evidence Re-use**  
across products and programs on a cloud solution that unifies your entire product development in a single access portal. Data based – not document based – for intelligent platforming

**Robust, Concurrent Design**  
enabling quick domain specific progress with class leading design tools feeding into efficient workflow merges

**Design File Integrity** – accessible, integrated, high quality data throughout the product lifecycle for robust compliance and product maintenance

**Comprehensive Risk Management**  
traceability, application, & decision support through Requirements, Design, and Verification & Validation

**Digital Evidence** to reduce costly physical tests and iterate quickly. Validate and verify products with greater speed and efficiency using scalable, cloud-based collaboration technology

**Design Excellence** combines multi-disciplinary design collaboration with advanced design tools and multi-physics simulations to achieve competitively differentiated, premium-value devices. Unlock your design potential to a distinct competitive advantage.

