Digital Transformation: Challenges and Opportunities for SMBs

Mainstream Engineering
Siemens PLM Software
“We’ve developed the world’s first and only modular robotic system.”

Philip Norman, Founder, Ross Robotics
“Skybridge is a full-service UAV/UAS data collection company for precision agriculture”

Ian Henderson, Chief Operating Officer, Skybridge UAS
“Local Motors is a technology company that designs, builds and sells vehicles using co-creation and micro-manufacturing.”

Alex Feichter, Head of Product Development, Local Motors
Small to medium-sized businesses

SMB share of the U.S. economy

NUMBER OF BUSINESSES:

99.7% Small to medium

.3% Enterprise

U.S. Small Business Administration
Small to medium-sized businesses

SMB share of the U.S. economy

50% Small to medium
50% Enterprise

U.S. Small Business Administration
Small companies, big innovation
The opportunity
SMB survey – digital transformation as a source of competitive advantage

49.3% believe technology **levels the playing field** for small businesses versus larger corporations

40.8% believe **small size is an advantage** when it comes to adopting digital technologies

Source: IDC : Thriving in the Digital Economy: How small and midsize enterprises are adapting to digital transformation, 2016
The challenges
SMB manufacturing survey – business and digital technology challenges

Limited resources
52% struggle with limited resources and budgets

Inability to predict demand
97% report they can’t predict workloads beyond 6 months

Short term thinking
64% have purchased new licenses to ensure a project is completed (#1 response)

Struggle with data formats
#1 frustration
78% work with more than 1 file format

Source: Kelton/Siemens Survey: “Key Operational Inefficiencies of Product Design Projects,” 2013
The SMB challenge

SMBs need access to the same resources and tools of big business.

But SMBs also have unique needs and resource constraints.
Engaged Users
Mobility – the best design experience on any tablet, hands down. New apps like Catchbook.

Adaptive System
Scalable data management – built-in/cloud-enabled or Teamcenter. Solid Edge subscriptions.

Intelligent Models
Synchronous technology – the simplicity of direct modeling with the control of parametric design. Teamcenter Active Workspace.

Realized Products
Solid Edge Simulation. Femap, Simcenter Portfolio. Solid Edge Manufacturing.
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Engaged users
Solid Edge + Surface

“Being able to run my CAD software offline is critical to me, as I often work at my client’s premises where I don’t have access to the internet.”

Ryan Spoering, Founder
Lab Machinist Solutions, LLC
Engaged users
Solid Edge + Surface

Run full 3D CAD software on-the-go with Surface and Solid Edge®

Engineers need the right tools to be successful in the mobile world—that means the right software on the right device. Siemens PLM’s Solid Edge software offers an innovative approach to product development, made with engineers in mind.

For a limited time, get one free year of Solid Edge Design and Drafting (valued at $900 USD) when you buy a new Surface Book or Surface Pro 4.
Engaged users
Solid Edge + Catchbook
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Realized Products
Solid Edge Simulation….. Femap, Simcenter Portfolio. Solid Edge Manufacturing.
“We use Solid Edge as a rapid development tool to design the visuals and produce the real devices we deliver to customers.” Synchronous technology is “a curious combination of extreme accuracy and extreme fluidity.”

Philip Norman, Founder, Ross Robotics
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Realized products
Solar Impulse: Femap, part of the Simcenter software portfolio

“Using Femap, it was really fast to see what we had to work on and where we could optimize.”

Geri Piller
Head of Structural Analysis
Realized Products
Anger Machining: Solid Edge + NX CAM + Teamcenter

ANGER MACHINING
“transfer centers” that combine the benefits of transfer lines and machining centers

CHALLENGES
Market demand for increased machining productivity
High precision requirements
Customer demand for flexibility

“…to be able to make the right decisions faster we link Teamcenter with our most important software tools, from the ERP system to Solid Edge CAD software. Teamcenter helps us depict a comprehensive digital value chain.”

- Roland Haas, Head of Technology and R&D
“Solid Edge enables us to closely integrate with downstream machining systems, reducing the time and cost of design rework due to errors.”

Kuo Kuochen, R&D Manager, Parfaite Tool
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Adaptive system
Scalable data management

• Solid Edge data management
  (Built in)

• Teamcenter Rapid Start
  • Teamcenter
Adaptive system
Solid Edge: Cloud-enabled design – on your terms

Solid Edge: Cloud-enabled design
Adaptive system
Sparkonix: Solid Edge + Teamcenter Rapid Start

SPARKONIX
leading manufacturer and exporter of electrical discharge machining (EDM) equipment

CHALLENGES

Manage growing amount of CAD data more effectively
Speed product development
Facilitate re-use of design data
Improve control of access to data

“Ultimately, Teamcenter Rapid Start has enabled us to streamline design data and make it available to all for re-use, from design to sales and support.”

Anand Atole Asst. Manager of Design, Sparkonix
Solid Edge

**Design**
Direct modeling with the flexibility of parametric design

**Simulation**
Part and assembly design validation

**Manufacturing**
Accurately and efficiently manufacture parts

**Data management**
Scalable data management to meet needs of growing businesses

**Apps**
Powerful, specialized applications to extend capabilities
Digitalization changes everything, everywhere.

SMB: an important segment with unique needs and constraints

The best SMBs are driving innovation and disruption

Siemens PLM Software provides value, flexibility and choice
Digital Transformation: Delivering mission-critical products
Ted Gervais, Owner, VP Engineering, Cascon