

DESIGN FOR SIX SIGMA

FROM CUSTOMER VOICE TO PROVEN DESIGN.

DESIGN IT RIGHT BEFORE IT IS BUILT.

DFSS is built for professionals who decide what gets built and why — helping teams translate customer needs into measurable requirements, make evidence-based design choices and verify that the final design delivers value.

THE DFSS ADVANTAGE

01

Requirements you can measure

Turn customer needs into clear, measurable targets with defined limits.

→ 02

Traceability end to end

Connect every critical design choice back to the need it serves.

03

Concepts chosen on evidence

Compare alternative concepts using structured criteria rather than opinion.

04

Design right from the start

Build customer requirements into the design before costly late-stage changes.

05

Learning through application

Expert-led learning, industry cases and a live Action Learning Project.

LEARNING JOURNEY



Expert-led learning & case studies

Build the DFSS mindset through practical concepts and industry examples.



Application on a real workplace problem

Apply DFSS to a live product or design challenge through an Action Learning Project.



Certificate, peer collaboration & CoP

Build capability through application, peer learning and continued collaboration.

WHO IS THIS FOR?

Product & design

Translate customer needs into measurable design requirements.

Marketing & insight

Convert the voice of the customer into actionable product requirements.

Quality & assurance

Build verification and traceability into the design process.

Engineering leaders

Align customer value, technical requirements and design decisions.

ONE DFSS CAPABILITY. MULTIPLE BUSINESS OUTCOMES.

DFSS can help organisations address design challenges involving:

CUSTOMER VALUE

What does the customer actually value — and how can we design for it?

REQUIREMENTS

How can customer expectations become measurable design targets?

QUALITY

How can quality be designed into the product rather than corrected later?

COST

How can we meet customer needs without unnecessary design complexity?

PERFORMANCE

Which design characteristics most influence customer-perceived performance?

RISK

How can potential design gaps be identified before launch?

LAUNCH

How can we increase launch acceptance and reduce late design reversals?

One method. Every product where customer needs must become design decisions.

FROM NEED TO PROVEN DESIGN

CUSTOMER VOICE

What does the customer value, need and expect?

REQUIREMENTS

What measurable requirements translate those needs into targets?

CONCEPTS

What alternative concepts could deliver the required value?

EVALUATION

Which concept best meets the critical requirements?

DESIGN

How should the concept become engineering specifications?

VERIFICATION

Does the final design deliver the intended customer value?

BUILT TO WIN OVER THE WHOLE COMPANY

A talent advantage

People gain the rare ability to speak both customer and engineering — becoming the person both sides trust.

A business advantage

Organisations improve launch acceptance and reduce late reversals by ensuring the design is aimed at the right target from the start.

THE DFSS PROMISE

Better requirements. Better concepts. Better designs.

Translate customer voice into measurable targets.

Make design choices with evidence.

Verify that the design delivers value.

Build customer-focused design as a capability.

WHERE CAN DESIGN EXCELLENCE CREATE VALUE?

DFSS can be applied wherever organisations need to translate customer needs into measurable requirements and evidence-based design decisions. Each opportunity below reads as challenge, DFSS application and potential impact.

01 AEROSPACE

Component & structural design **Better design alignment**

Performance, safety, weight & cost compete → Translate critical needs into design targets

Cabin & interiors **Higher passenger acceptance**

Comfort, usability, safety & aesthetics interact → Convert passenger needs into CTQs

Flight-control systems **Reduced design risk**

Response, reliability & safety tightly coupled → Link needs to critical characteristics

MRO & serviceability **Improved maintainability**

Maintenance needs considered late → Build serviceability into the design

Aerospace equipment **Better operational fit**

Operator, production & maintenance needs compete → Evaluate concepts cross-functionally

02 PHARMACEUTICALS

Drug delivery devices **Higher user acceptance**

Usability, safety & performance must align → Translate patient needs into CTQs

Pharmaceutical packaging **Better packaging performance**

Protection, usability & compliance compete → Convert needs into packaging requirements

Manufacturing equipment **Better equipment fit**

Production, quality & operator needs vary → Define requirements before concept choice

Diagnostic products **Improved product performance**

Accuracy, reliability, speed & usability interact → Identify critical requirements

Patient-centric products **Better product-market fit**

Specifications may miss real expectations → Structure voice-of-customer inputs

03 INFRASTRUCTURE

Building design **Better stakeholder alignment**

Owners, users & operators have competing needs → Prioritise requirements, evaluate concepts

Transportation systems **Improved user experience**

Safety, capacity & accessibility compete → Translate traveller needs into CTQs

Water & wastewater **Improved system performance**

Capacity, reliability & operating needs interact → Build requirements into system design

Industrial facilities **Better operational readiness**

Production, safety, flow & upkeep must align → Convert needs into facility requirements

Smart infrastructure **Better adoption & scalability**

Technology, usability & scalability must work together → Evaluate architectures against user needs

04 HEALTHCARE

Medical device design **Safer, more usable devices**

Patient safety & clinician usability must align → Translate user needs into requirements

Diagnostic systems **Higher user confidence**

Accuracy, speed & usability affect adoption → Identify critical user characteristics

Surgical equipment **Better clinical usability**

Precision, ergonomics & reliability compete → Capture clinical requirements, test concepts

Hospital equipment **Better equipment fit**

Clinical, operational & upkeep needs differ → Define stakeholder CTQs before selection

Healthcare facilities **Better patient experience**

Patient experience & clinical workflow interact → Translate needs into facility targets

05 AUTOMOBILE**Vehicle concept & architecture** **Better market fit**

Performance, comfort, features & price compete →
Translate expectations into CTQs

EV & powertrain systems **Improved product-market fit**

Range, charging, packaging & cost interact → Convert
usage needs into system targets

Vehicle interiors **Higher customer satisfaction**

Comfort, ergonomics & perceived quality interact → Link
experience to design characteristics

ADAS & electronic features **Higher feature acceptance**

Technology must match user expectations → Translate
needs into system requirements

Commercial vehicles **Better fleet value**

Fleets value uptime, payload & serviceability → Prioritise
fleet requirements as targets

06 CHEMICAL INDUSTRIES**Product formulation** **Better product-market fit**

Performance needs drive complexity → Translate needs
into measurable targets

Paint & coatings **Better finish & durability**

Appearance, durability & application compete → Convert
application needs into CTQs

Adhesives & sealants **Improved application performance**

Bond strength, curing & application vary → Define
measurable requirements

Specialty chemicals **Better customer fit**

Purity, handling & consistency needs differ → Translate
specifications into design targets

Sustainable products **Higher sustainable-product acceptance**

Environmental expectations meet performance →
Balance customer & sustainability needs

07 ELECTRONICS / SEMICONDUCTORS**Consumer electronics** **Better market fit**

Performance, usability & price compete → Translate
preferences into CTQs

Semiconductor devices **Reduced design risk**

Performance, power & thermal behaviour interact → Link
requirements to characteristics

PCB & electronic assemblies **Better design alignment**

Function, reliability, size & cost must balance → Convert
system needs into assembly targets

Sensors & embedded systems **Improved application performance**

Accuracy & response vary by application → Translate
needs into specifications

Displays & interfaces **Better user experience**

Usability, readability & aesthetics drive acceptance →
Evaluate concepts against user needs

08 TEXTILE / LEATHER**Fabric development** **Better product-market fit**

Comfort, appearance, durability & price interact →
Translate preferences into requirements

Apparel design **Higher customer acceptance**

Fit, comfort, aesthetics & function compete → Convert
needs into garment CTQs

Technical textiles **Better functional performance**

Application performance is hard to specify → Translate
needs into technical requirements

Leather products **Higher perceived quality**

Appearance, durability & material quality interact → Link
expectations to characteristics

Footwear & accessories **Better consumer experience**

Fit, comfort, aesthetics & function compete → Evaluate
concepts against consumer CTQs

WANT TO BUILD DESIGN EXCELLENCE AS AN ORGANISATIONAL CAPABILITY?

LISTEN BETTER. DESIGN RIGHT. PROVE THE VALUE.

DFSS · Design for Six Sigma — built for anyone who decides what gets built, and why.

TO KNOW MORE, CONTACT US

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