

# DFSS 내에서의 **Axiomatic Quality Control (1 Day Seminar)**

**Intended for:** Six Sigma and DFSS Black Belts and General Quality staff.

**Purpose of seminar:** To introduce axiomatic design as a quality assurance tool for design processes

**일시 :** 2005 년 2 월 18 일 금요일

**한양대학교 서울 campus 내 신소재 공학관 318 호**

**장소 :** Campus VR Tour 화면에서 '14 번 신소재 공학관'을 선택하시면 찾아오시는 길 안내를 받으실 수 있습니다.

**등록비 :** 19 만 5 천원 (점심식사 포함)

**주최 :** **Axiomatic Design Solutions, Inc.**  
[http://www.axiomaticdesign.com/training/korean\\_dfss.asp](http://www.axiomaticdesign.com/training/korean_dfss.asp)

**주관 :** 한양대학교 최적설계신기술연구센터  
**Center of Innovative Design Optimization Technology**

**후원 :** **DFSS Academy / (주) 한국 아이템 개발**  
Axiomatic Design Solutions, Inc. / 도성희  
phone: +1-617-746-9222 (Ext: 202) / email: [dosh@axiod.com](mailto:dosh@axiod.com)

**문의 :** 한양대학교 박경진 교수  
phone: (031)400-5246 / email: [gjpark@hanyang.ac.kr](mailto:gjpark@hanyang.ac.kr)

(주) 한국아이템 개발 이경원 교수  
phone: (031)319-5394 / H.P: 019-369-8226 / email: [lkw@kpu.ac.kr](mailto:lkw@kpu.ac.kr)

**등록마감 :** 2005 년 2 월 4 일 금요일

## **Register / 참가 신청**

[https://protected12.purehost.com/d30053726/services/korea\\_register.asp](https://protected12.purehost.com/d30053726/services/korea_register.asp)

**일정 :**

9:00 ~ 9:30	설계 방법론에 대하여.	한양대학교, 박경진 교수
9:40 ~ 12:30	Axiomatic Design 개론	ADSI, 도성희 박사
12:30 ~ 1:30	점심	-
1:30 ~ 2:30	Axiomatic Design 과 QFD	ADSI, 도성희 박사
2:30 ~ 3:30	Axiomatic Design 과 FMEA	ADSI, 도성희 박사
3:30 ~ 5:30	트리즈의 국, 내외 성공 사례 소개 및 공리적 설계와의 상호 보완	한국산업기술대학교, (주)한국아이템개발 이경원 교수

## The Value Proposition of a Pre-emptive DFSS Process

The analysis of product or project failures demonstrates, although the development 'Failed' in later stages, that the actual cause of the failure usually occurred in the earliest conceptual design period of the process. However, most organizations, at best, only demonstrate ad-hoc approaches to their design processes at the synthesis phase, mostly due to a lack of available DFSS process technology. As a result, most quality efforts are inspection and analysis techniques to 'Undo' mistakes already committed. Axiomatic Design Solutions provides DFSS technology in the form of a pre-emptive design process that enables companies to implement a rational, quantitative approach to design. With this framework, practitioners can assess the design quality and mitigate development risk in the earliest phase of the design process, the requirements analysis and design synthesis phase.

If it's not Axiomatic, it's not DFSS.

**The axiomatic design process, developed at MIT, reduces cost, speeds time to market and lowers risk in systems and hardware development:**

### Measuring Design Quality

Today in most product design endeavors the only design quality approach is inspection, usually by a Gate Review process, after the CAD or similar formal documentation cycle. By then, any major design mistakes have been committed to costly formalization of documentation. And, if found, design mistakes are difficult to undo.

Axiomatic Design offers a lightweight functional modeling tool to posit and analyze designs for quality by applying the design axioms to the design model. Architectural and decision errors can be visualized and corrected BEFORE committing them to CAD documentation.

### Avoiding Design-Build-Test-Redesign cycles

One of the larger components of development delays are the cycles of Design-Build-Test-Redesign that occur, usually at integration of solutions, since there are few mechanisms to avoid these test cycles.

Axiomatic Design processes provide designers with a synthesis environment that lets them try out aspects of the functional design and test the dependency interaction between the components of the solution without the typical design-build-test-redesign cycles.

### Capturing Design Intent

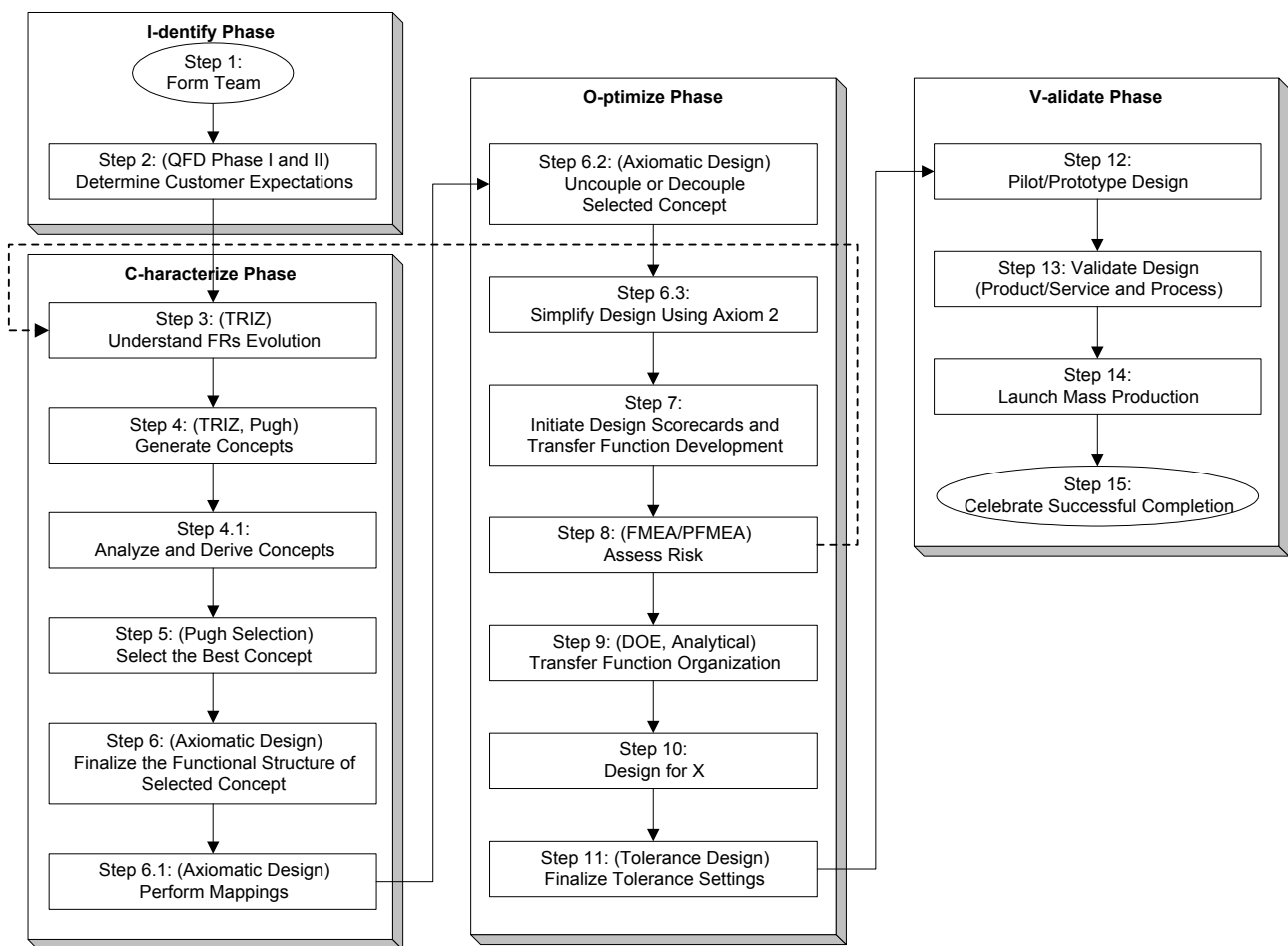
The axiomatic process captures all of the incremental design decisions, including paths examined and not taken, in a non technical format. It is a vaccination against employee turnover and an invaluable record for future reference.

### Assessing Design Risk

As part of the axiomatic design process, risk assessment is formalized at the concept generation phase. This provides the earliest possible risk mitigation practice, in order to minimize time-to-market.

## Managing Impact Traceability

The axiomatic design process inherently documents full traceability of customer needs to constraints and requirements, to decomposition solution logic, into solution domain, and then into product structures and conceptual BOMs. This enables analysis of the impact of changes in requirements as these changes ripple through the functional design model.



**The DFSS project algorithm.**

[Source: Design for Six Sigma - A Roadmap for Project Development, Kai Yang & Basem El-Haik]