DEWS2007

Industrial Session

Panel Discussion

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Coodinated by:
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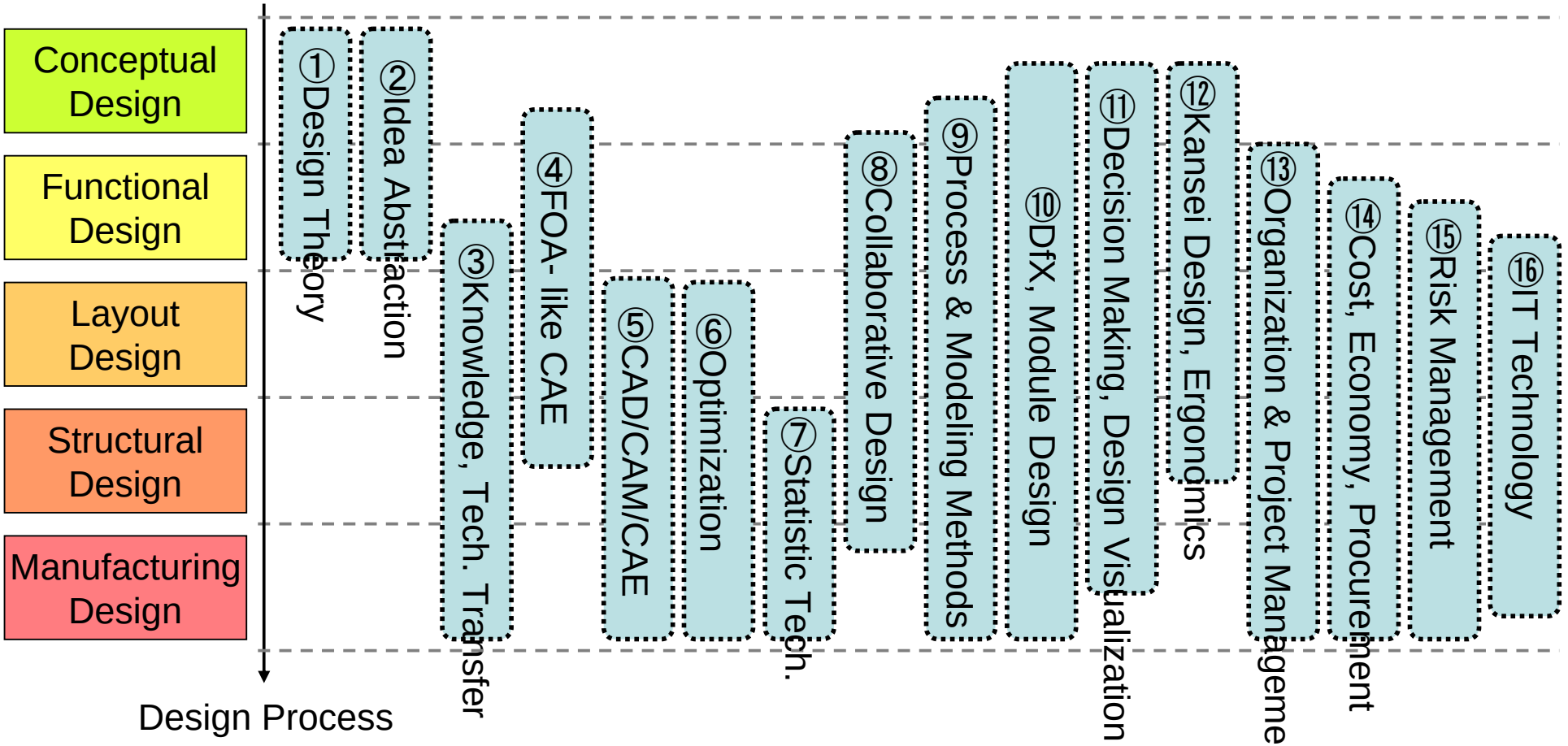
Q1

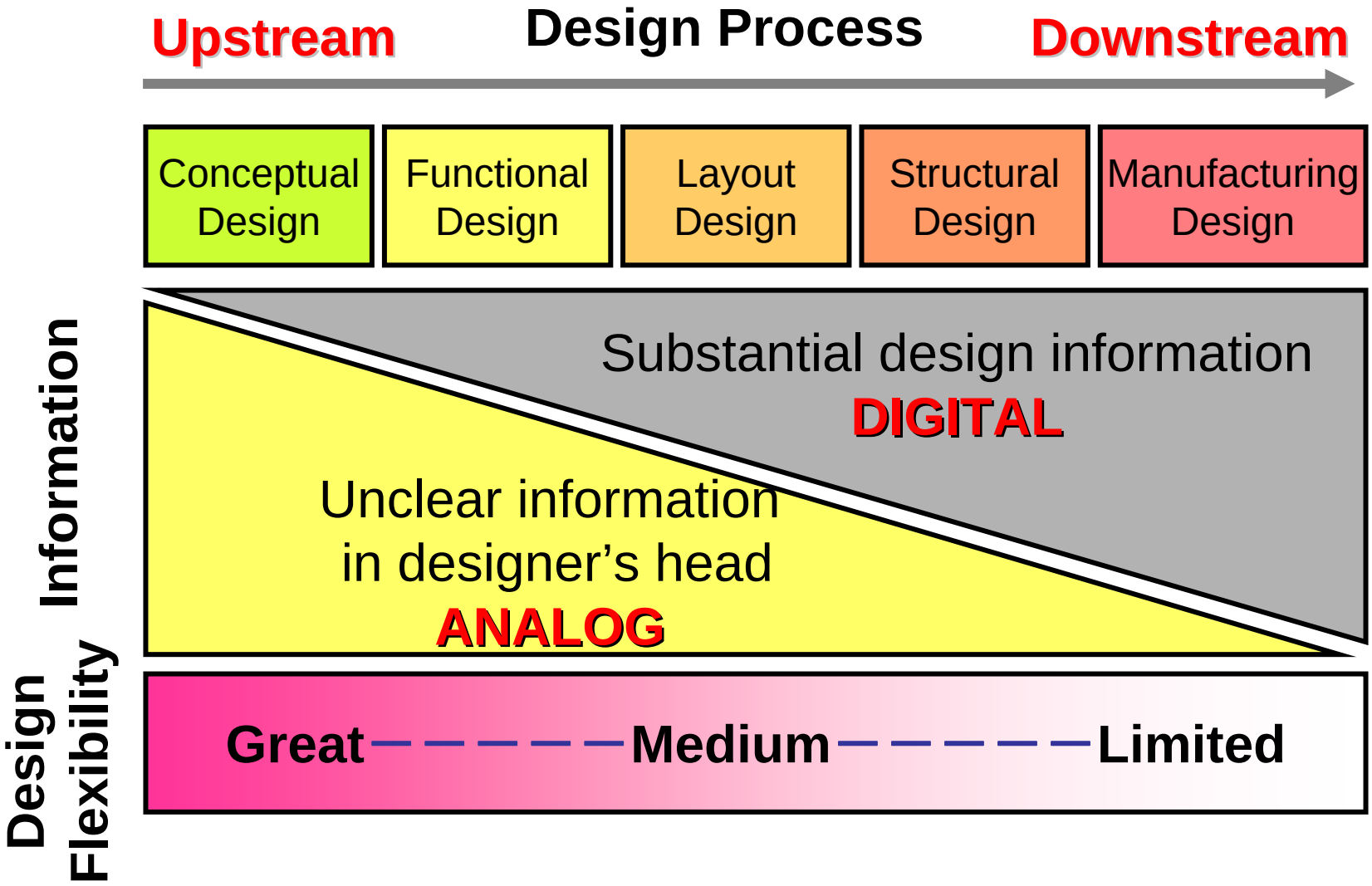
Is Design Engineering useful for practical product development?

16 Groups of Design Methods/Tools



Upstream Design (Analog)
vs.
Downstream Design (Digital)

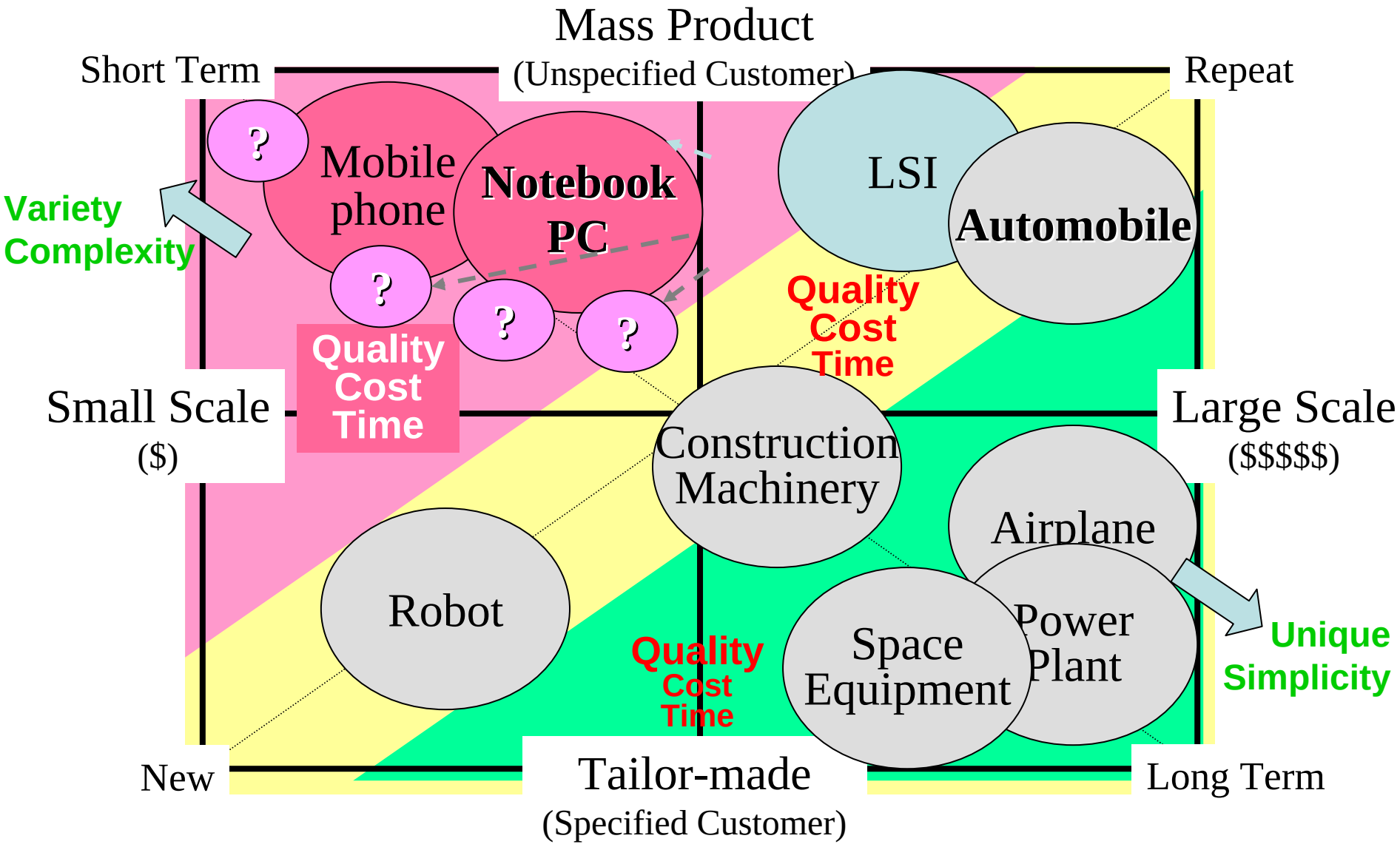
Relationship between Design Process and Design Information



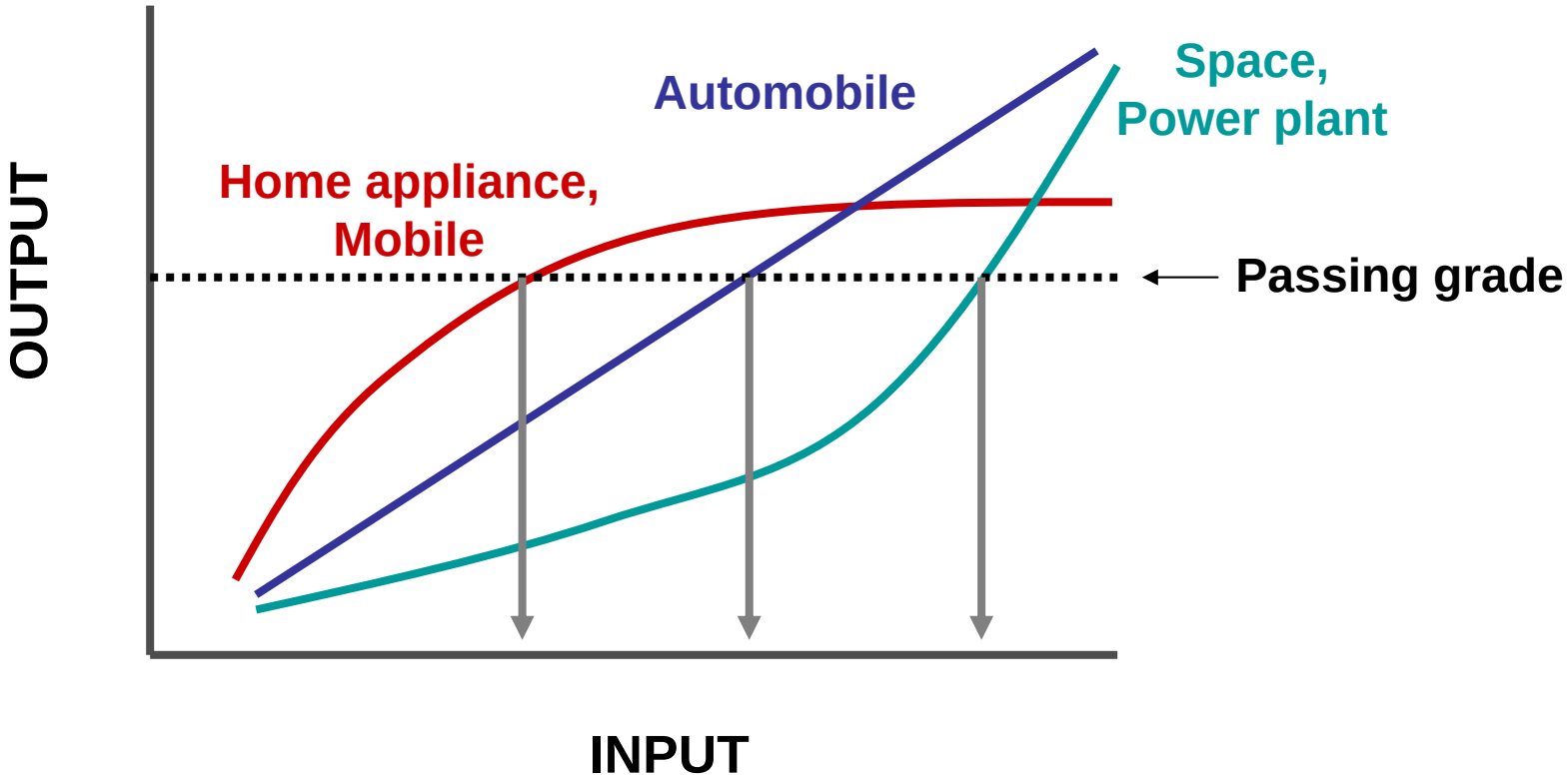
Q2

Is digital tool (CAD/CAE) sufficient for your product development?

Classification of Product Development



Input vs. Output for Digital Tool



Digital tool: CAD, CAE, CAM, PDM, PLM, etc.

Q3

What kind of request do you have for Design Engineering in the coming ten years from industrial side?

Digital thinking

Analog thinking

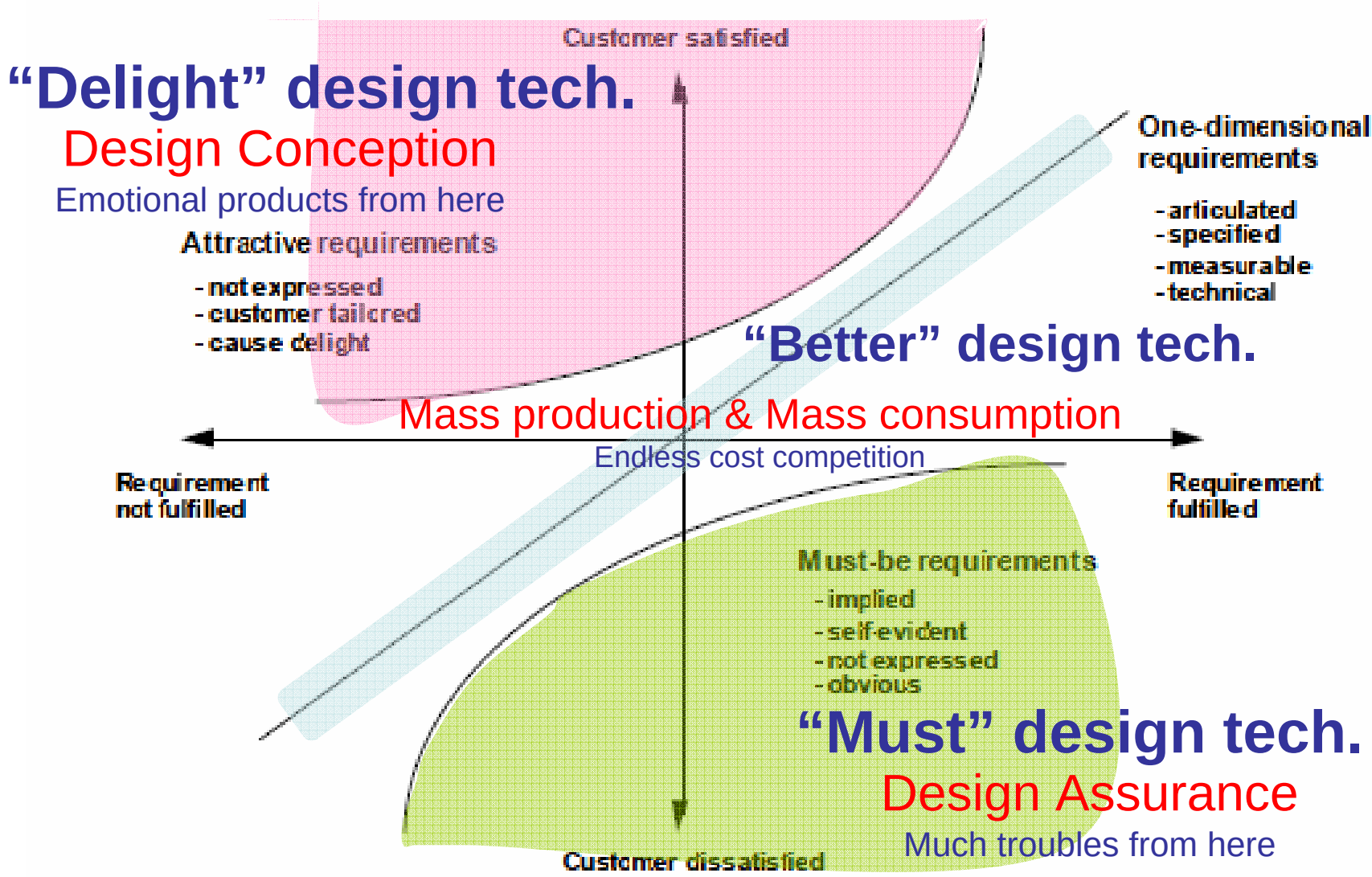
Downstream design

Upstream design

INTRODUCTION

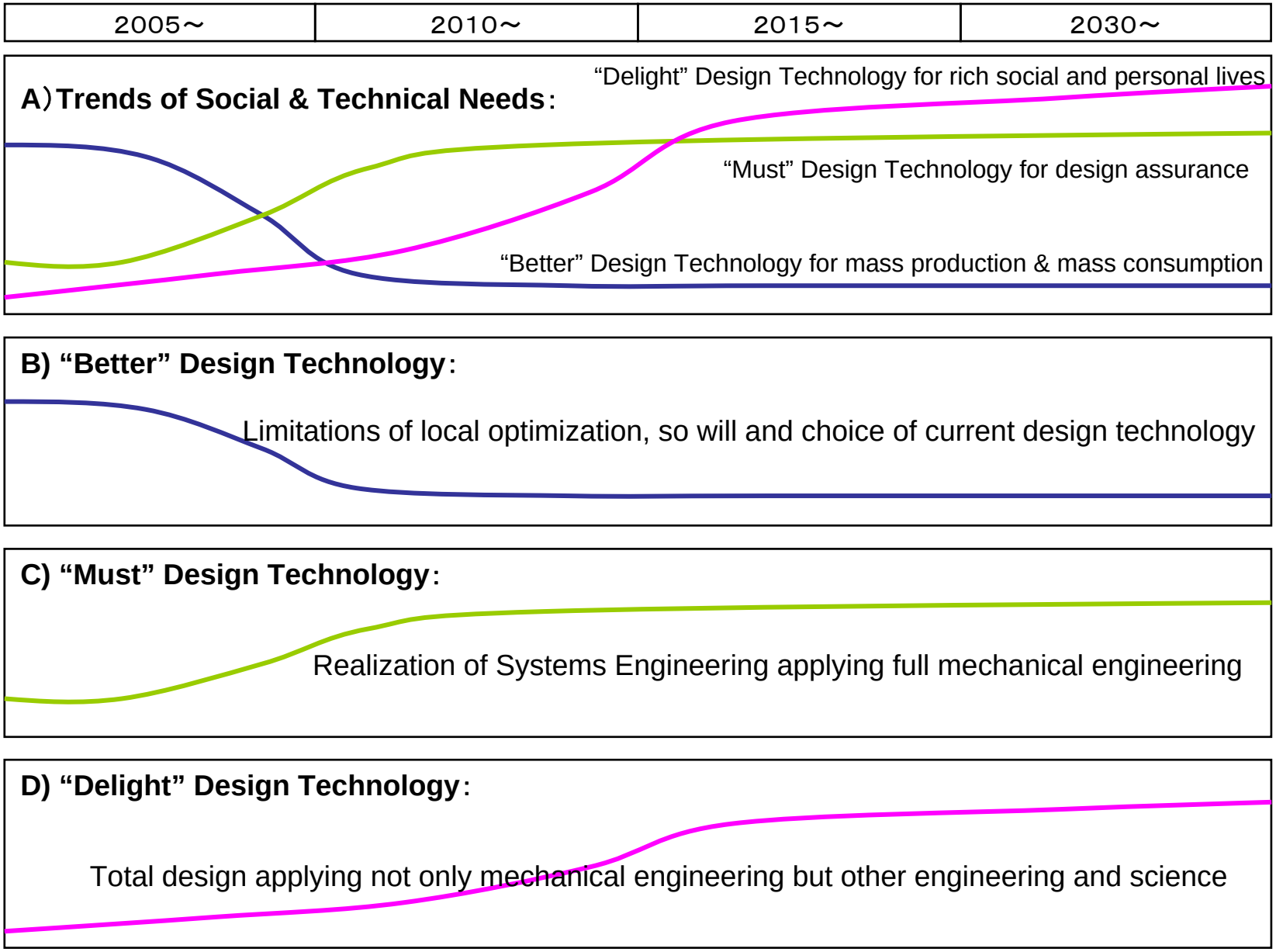
Design Engineering Roadmap toward 2030

Major Key Technologies of Design Engineering



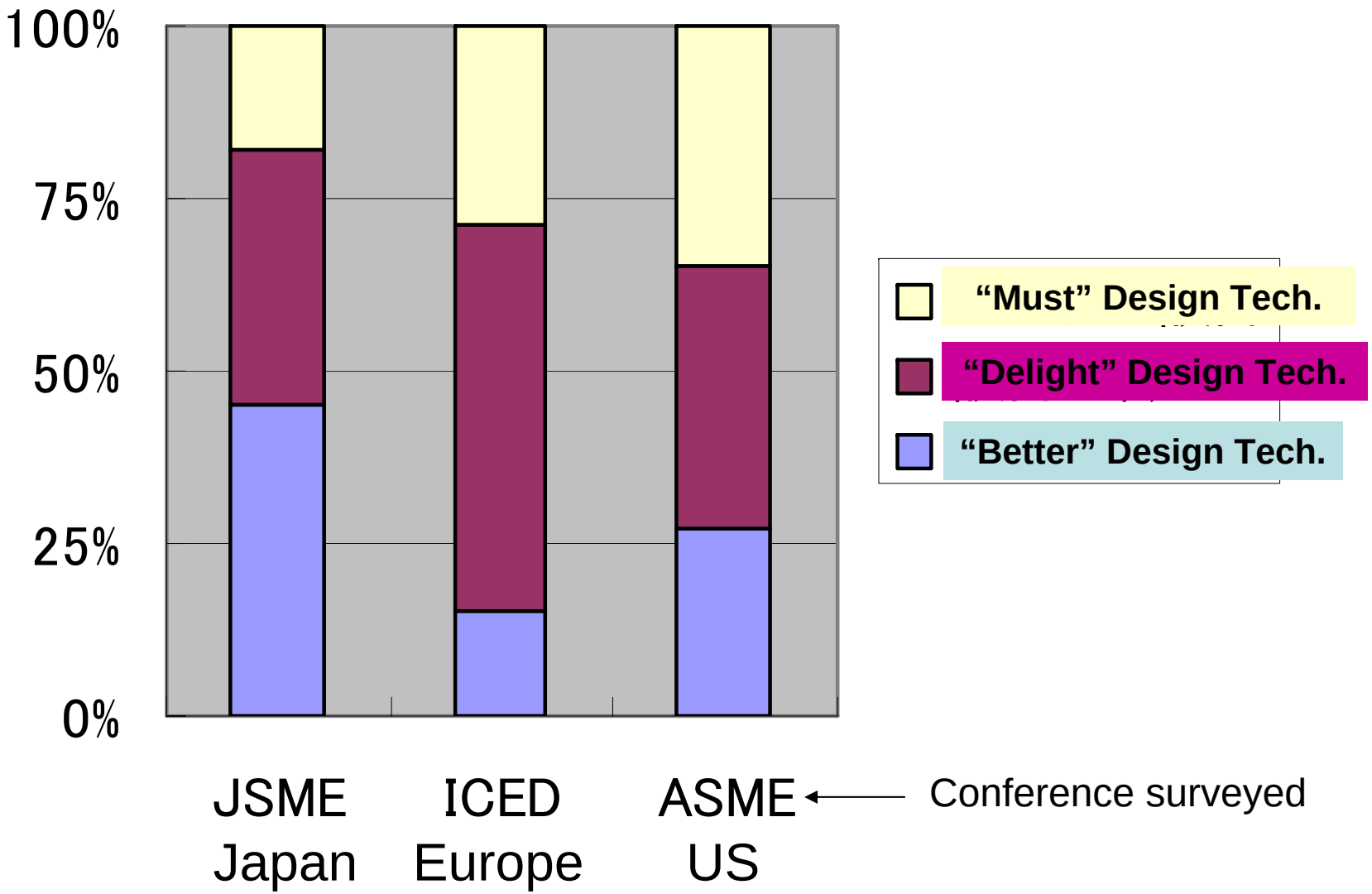
JSME activity

Design Engineering Roadmap



Classification of Design Methods/Tools

Comparison of Major Emphasis on Design Engineering between Japan, Europe, and US



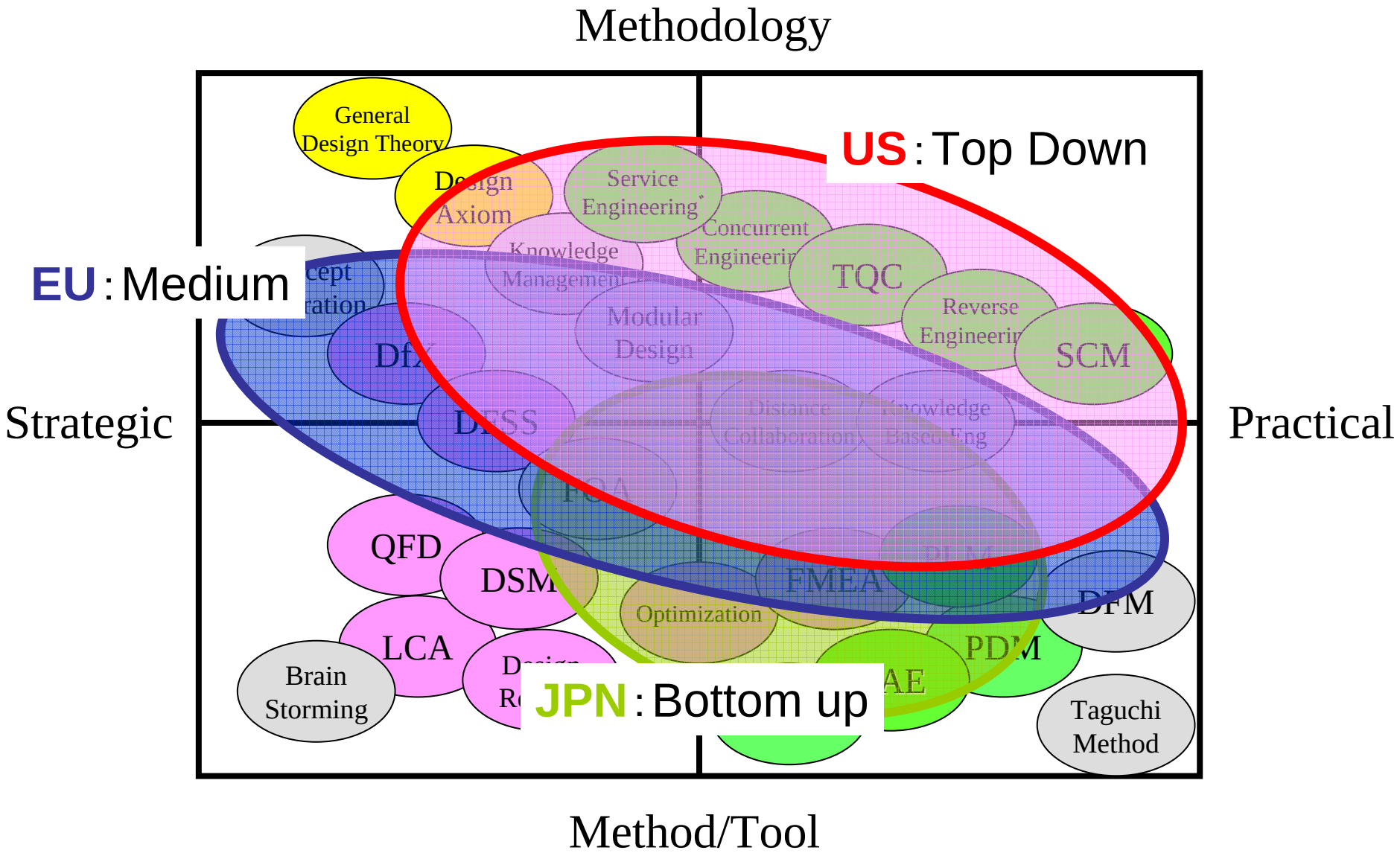
CONCLUSION

No conclusion in this panel,
but
continuous collaboration with
academia and industry is
important for developing
Design Engineering

APPENDIX

Western-Style vs. Japanese-Style

Items	Western Style	Japanese Style
Culture	Hunting People	Agricultural People
Society	Competitive Society	Middle-class Consciousness
Employment Systems	Annual Salary System	Lifetime Employment System Seniority Wage System
Organization	Flat	Pyramid
Decision	Top-Down System	Council System or Decision by Majority
Measure	Originality	Class Curve
Product	Innovative Products by Strategic Policy	Better Products by Improvement
Leading Products	Aerospace	Automobile Digital Consumer Products
Production Systems	Own Company	Keiretu System
Companies' Biggest Concern	Profit	Market Share
Advantage in Product Development	Design Technology	Product Technology
Research	Basic Research	Applied Research
Proverbial Truth	First come, first served. The end justifies the means. Time is money. Wall haves ears. Work while you work, play while you play.	The nail that sticks up gets hammered down. Every body's business is nobodies business. Speech is silver, silence is gold. Too many cools spoil the broth. Two beard are better than one.


Methodology
US : Top Down
EU : Medium
JPN : Bottom up
Strategic
Practical
Method/Tool
General Design Theory
Axiom
Service Engineering
Concurrent Engineering
Knowledge Management
TQC
Reverse Engineering
SCM
Modular Design
DfX
QFD
DSM
FMEA
Optimization
LCA
Brain Storming
PDM
Taguchi Method