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PDP Toolbox

Signature Series
DESIGN FACTORY
'Emotional 6 pack'
DECIDE - your preferred emotion
DECODE - uncover associated attributes
EMOTIONS - cannot be directly designed
ATTRIBUTES - define & effect emotion
DESIGN - communicate your emotion
FIRST IMPRESSIONS - count!!!
DESIGN FACTORY

Economy Budget	Leadership Mgmt Teamwork	Safety & order
Textbook PDD	Project [e.g. PMBOK]	Meetings
How to … at DF	To get stuff & services	Prototyping & Thinking by doing

Economy
Budget

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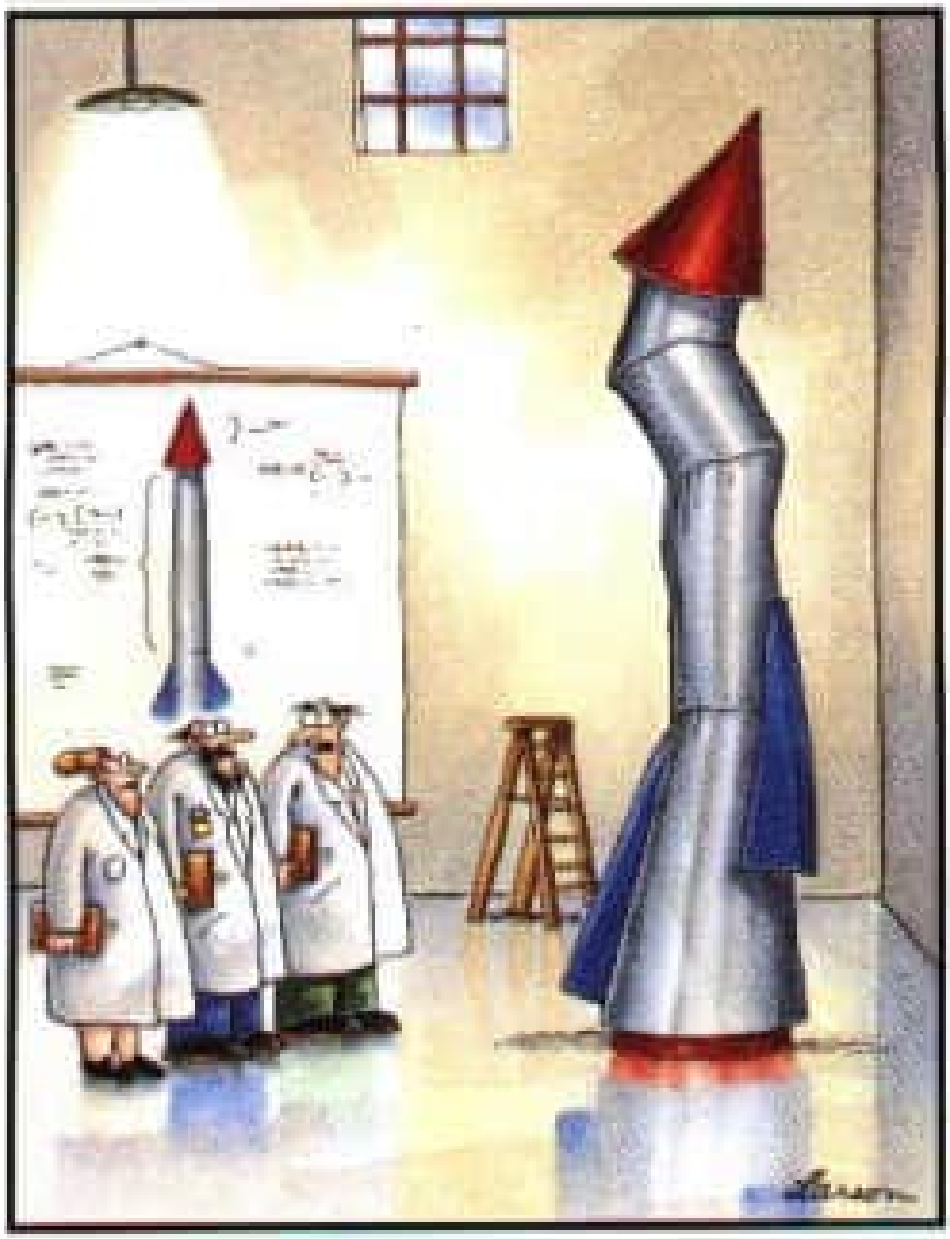
Leadership
Mgmt
Teamwork

What is expected from team leaders?



It’s time we face reality, mates. We are not rocket scientists.

© Larson

Decision making

Safety
& order

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Design Factory Safety

Introductions and manual
Version 22/09/2021

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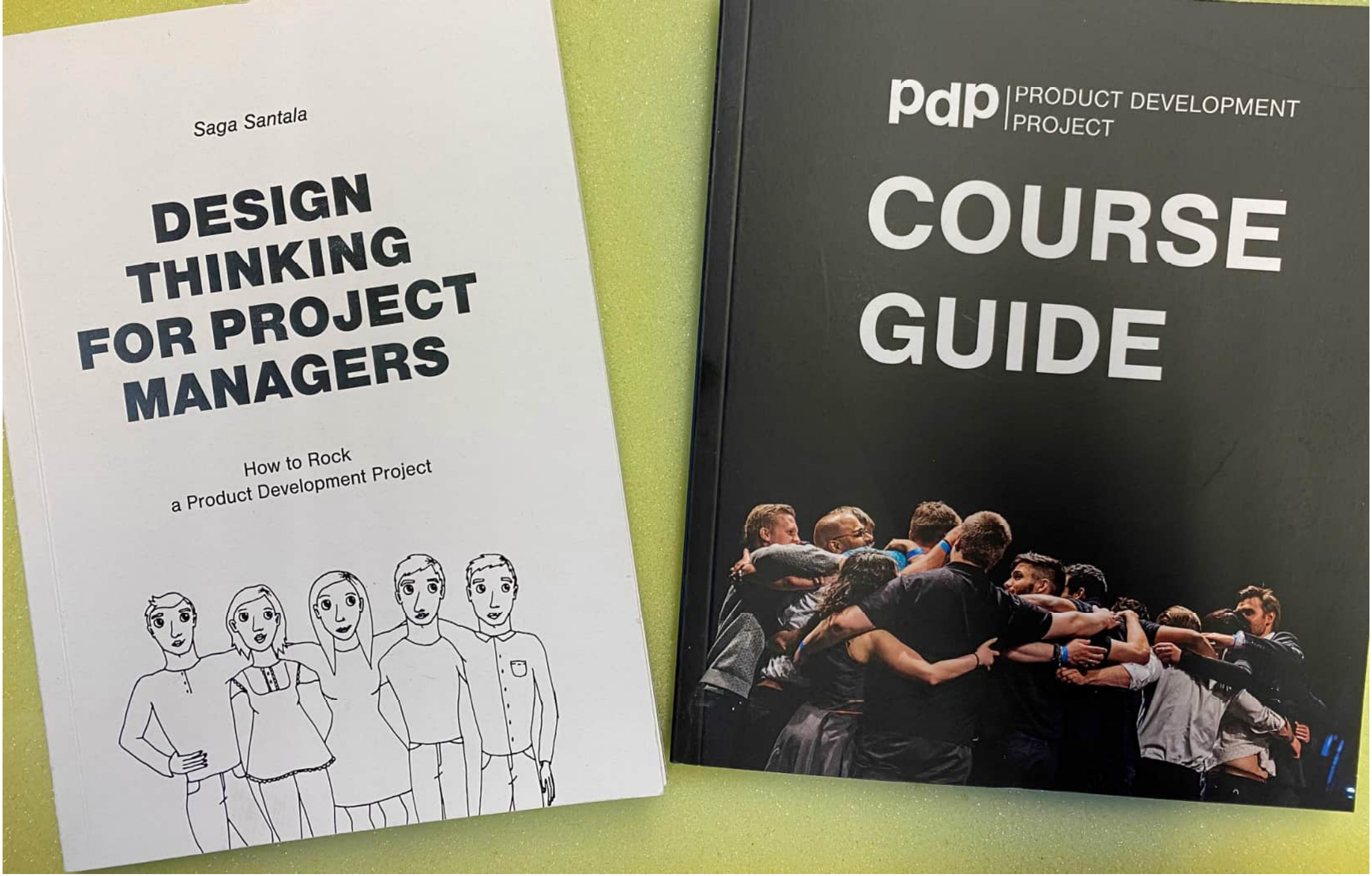
Textbook
PDD

FIFTH EDITION
Product Design and Development
KARL T. ULRICH • STEVEN D. EPPINGER
McGRAW-HILL INTERNATIONAL EDITION
nest
21
SIXTH EDITION
PRODUCT DESIGN AND DEVELOPMENT
Karl T. Ulrich | Steven D. Eppinger
Mc Graw Hill Education



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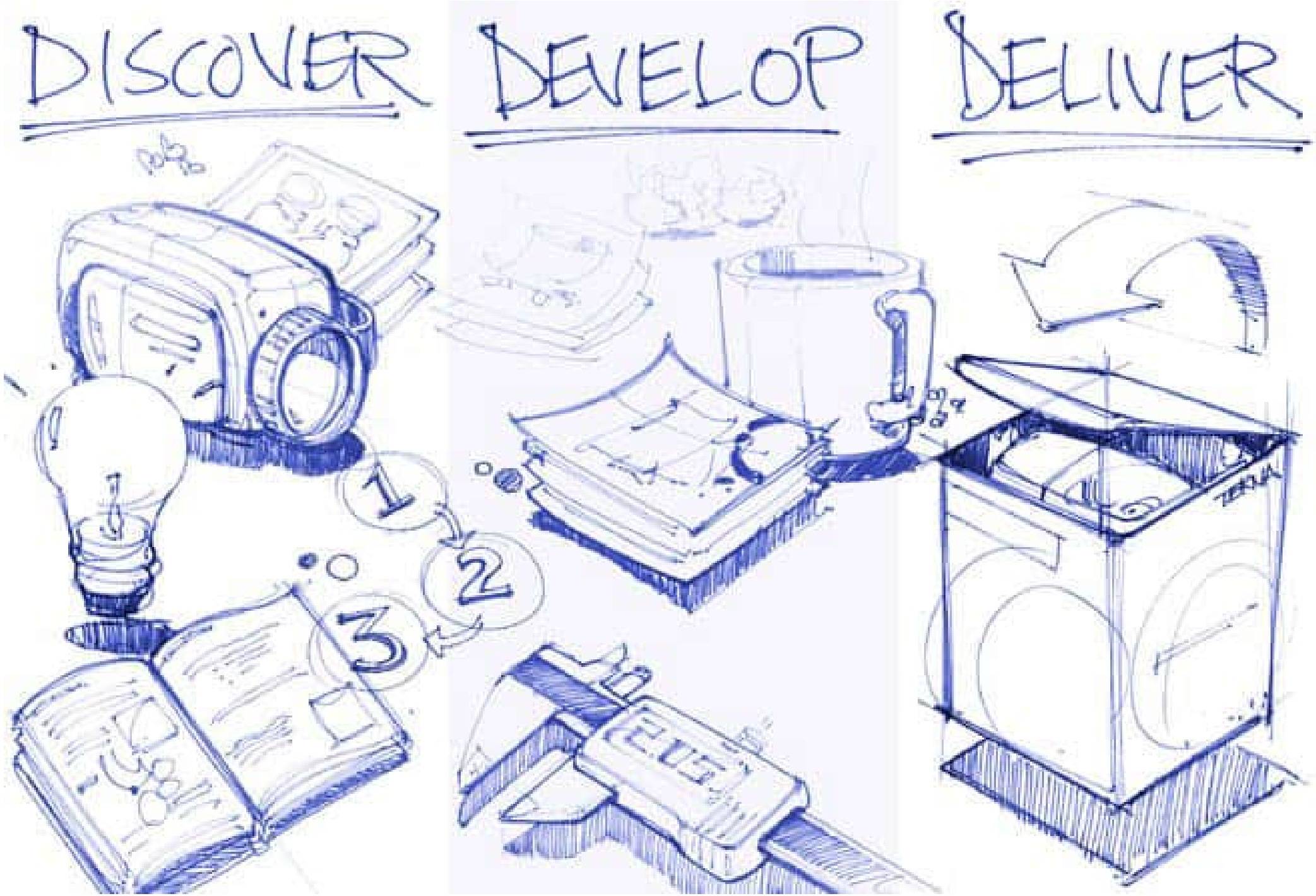

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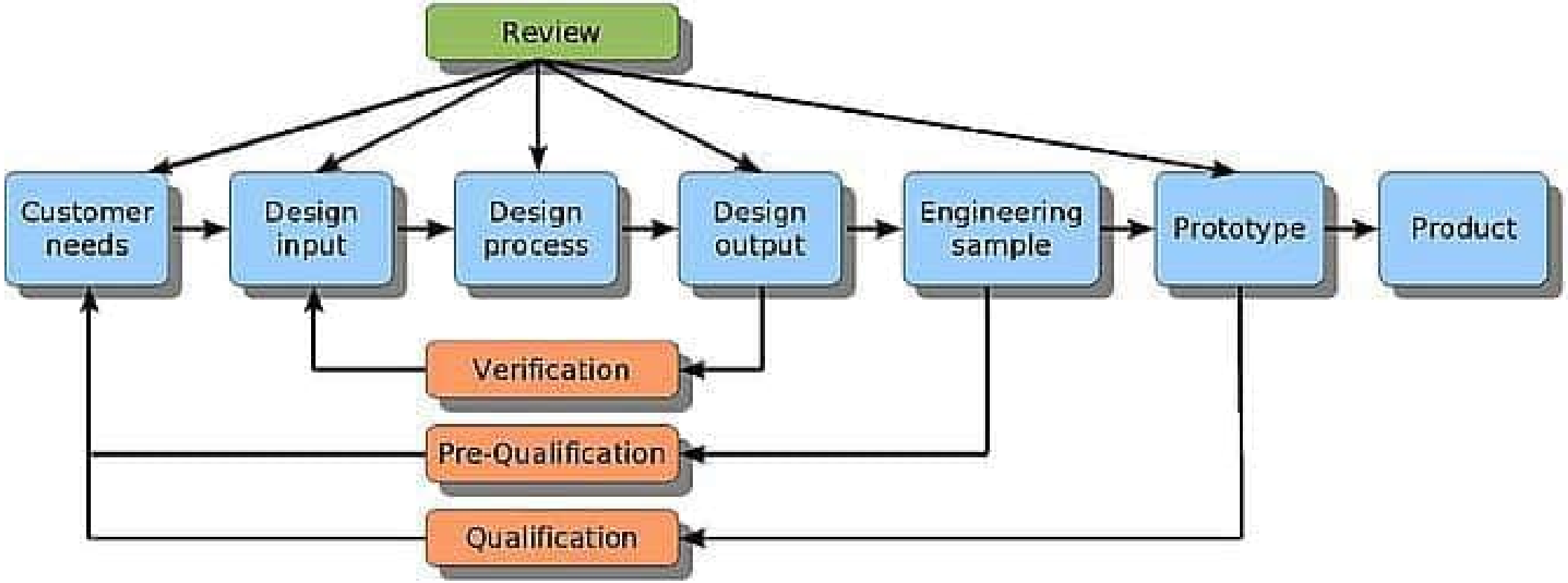
Review
Customer needs
Design input
Design process
Design output
Engineering sample
Prototype
Product
Verification
Pre-Qualification
Qualification

Become More Strategic
DEMAND METRIC

Product Development Process Diagram

1. Concept

Description of Activities:

- Idea Generation:
  - Requests
  - Customer Pain
  - Market Studies
  - Legislation
  - Competitors

Key Deliverables:

Product Concept Doc.

2. Research

Description of Activities:

- Assess Market:
  - Segments & Size
  - Growth Potential
  - Customer Needs
  - Legal Issues
  - Competition

Key Deliverables:

Market Research Report

Market Req. Document

Product Definition Statement

3. Analysis

Description of Activities:

- Business Analysis:
  - Cost/Benefit
  - Resources Required
  - Capital Expenses
  - Profitability/Margin
  - Anticipated Sales

Key Deliverables:

Business Case

Profitability Analysis

Product Req. Document

4. Develop

Description of Activities:

- Product Development:
  - Technical Specs
  - Prototyping
  - Trial Production
  - Testing & QA
  - Test Market Selling

Key Deliverables:

Product Dev. Schedule

Product Testing Report

Test Market Sales Report

5. Launch

Description of Activities:

- Go To Market:
  - Marketing Plan
  - Sales Training
  - Distribution Plan
  - Collateral Design
  - Set Launch Date

Key Deliverables:

Product Launch Plan

Product Launch Budget

Product ROI Forecast

Target Launch Date Set

Checkpoint #1

Description of Activities:

- Review Deliverables

Decisions:

- Go/No-Go to Research
- Incubate Idea or Kill

Checkpoint #2

Description of Activities:

- Review Deliverables

Decisions:

- Go/No-Go to Analysis
- Incubate Idea or Kill

Checkpoint #3

Description of Activities:

- Review Deliverables

Decisions:

- Go/No-Go to Develop
- Incubate Idea or Kill

Checkpoint #4

Description of Activities:

- Review Deliverables

Decisions:

- Go/No-Go to Launch

Checkpoint #5

Description of Activities:

- Review Deliverables

Decisions:

- Go/No-Go to Market

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CHANCE
CHAOS
CHANGE
COMPLEXITY
CREATIVE
POSSIBILITY
TRANSFORMING
HAPPENSTANCE
@JIMBRIGHT2012
EQUILIBRIUM
MOMENTUM
ATTEMPTING
DIVERGENT
ATTEMPTING
ADVENTUROUS
ILL-DEFINED
CONSTRUCTIVIST
OPPORTUNITY
DISORDER
EXPERIMENTING
ACTIVATING
PHASE-SHIFT
ASTONISHING
EXPLORING
OBLIQUITY
BECOMING
PROTEAN
GENESIS
INSPIRE
WISDOM
MOVING
CURIOUS
CHALLENGING
CONNECTION
LEFT-FIELD
VULNERABLE
NETWORKING
INSPIRATION
INSTINCT
OPTIONS
JOYFUL
ACTIVE
FLUID
DREAM
MYSTERY
HATCH
MOTION
PLAYFUL
GOING
JOURNEY
MEETING
JAUNT
INTEREST
DISRUPTING
IMAGINING
OFFBEAT
EXCITING
OPTIMISTIC
BIFURCATION
EMERGING
JOCKEY
DREAMING
GIVING
HACK
JUMP
OFFSHOOTS
NATURAL
PASSION
LIVING
FLEXIBLE
IRREGULAR
LIFE ENGAGEMENT
MEETING
FAILING
IRREGULAR
JOIN
JOKING
METAPHORS
HAVE-A-GO
IMPERFECTION
ADVENTURING
UNCERTAIN
EXTRAORDINARY
BEGINNERS-EYES
GROWTH
FLUCTUATING
FRACTAL
BUILDING
PARTICIPATE
EXCITEMENT
GENERATING
GERMINATE
ABANDON
AMAZING
DYNAMIC
CREATING
HUMOROUS
FORGIVING
MESSY
FLOW
ADVANCING
MUTABLE
FLUX
ACTUALIZING
CONSTRUCTING
CONFIDENCE
BOLD
INTREPID
CAN-DO
HUNCH
OPEN
AMENABLE
LUCK
LUCKINESS
CONFOUNDING
MOVEMENT
INQUIRE
PUPPYISH
PADDLE
BEGINNING
DYNAMICAL
JIG
JAZZ
ODDITY
EXPERIMENTAL
OPPOSITIONAL
RE-THINK
OPEN-MINDED
BREATHING
AMBIGUITY
INVESTIGATE
DOING
BEING
JOLTING
FREELY
BRAVE
PLAYING
ENGAGING
EVERYDAY

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Project
[e.g. PMBOK]

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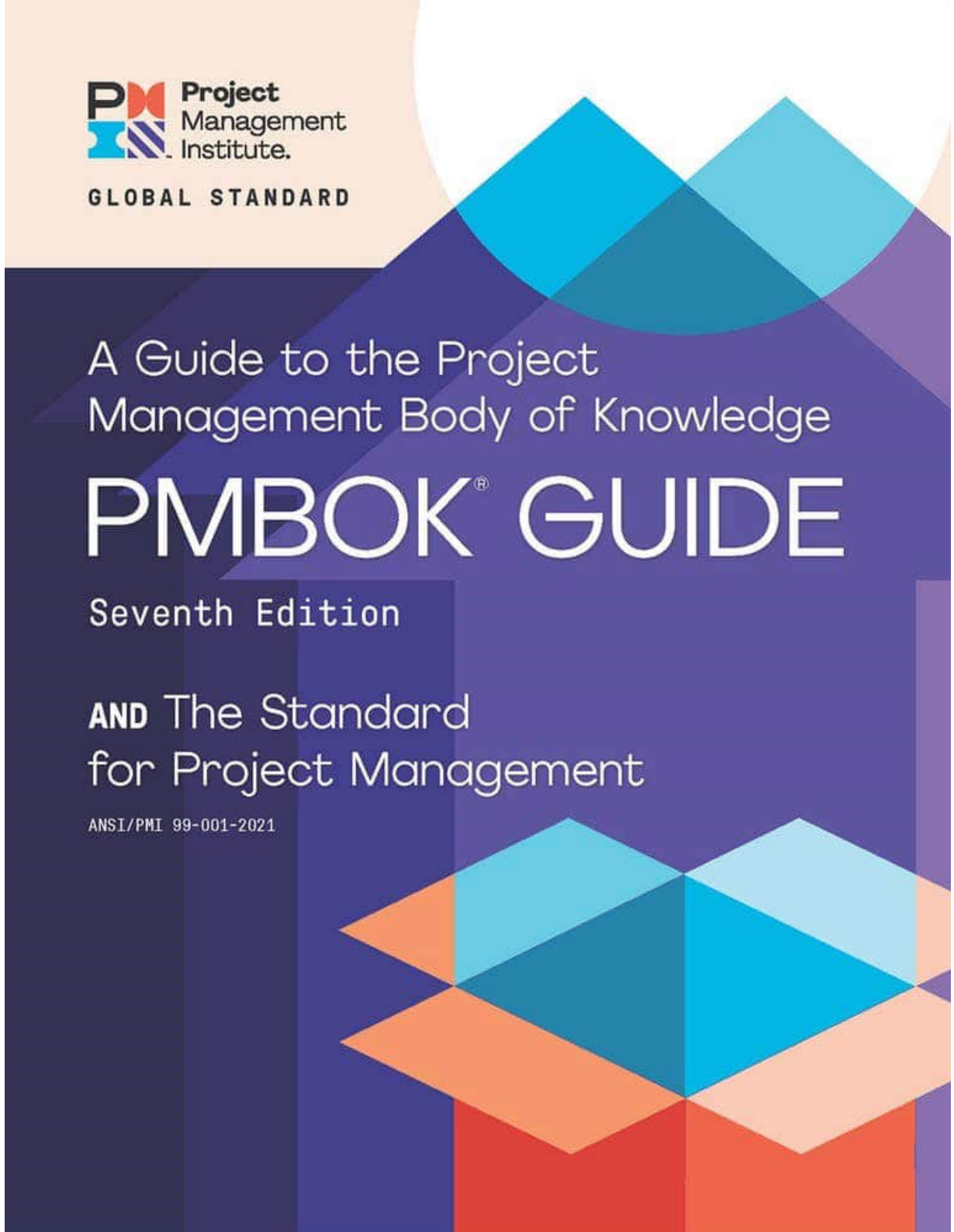


Project plan

1. Background
2. Project objectives, expected deliverables
3. Methods
4. Organization
5. Work breakdown structure
6. Schedule
7. Budget
8. Communication plan
9. Meetings , checks and decision making
10. Risk analysis
11. Plan for reporting and transfer of results
12. Tracking experiences, lessons learned and feedback

STUDENT PROJECT

-Difference bonus ?

-Part-time k, hobbies

-Enthusias

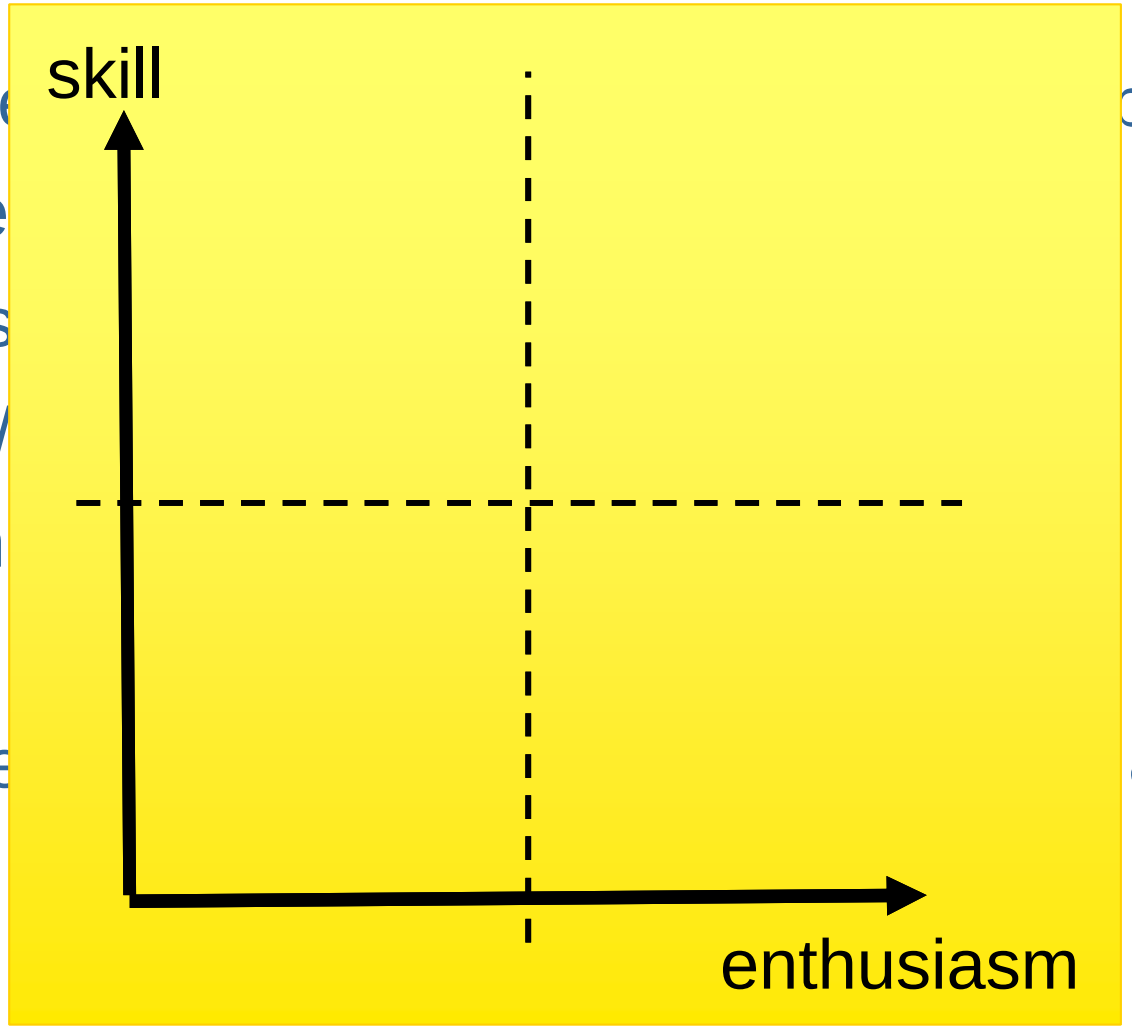
-Sponsor /

-Opportun

-Have fun

-This proje 8 months

-Make the



Make your self easy to find
Make yourself easy to help
Do your homework
We are all human
Start with what you can give
Look for the win win
Be concistent
Build your project brand (=promise,
no conflict with your ethics)
Luck happens (must buy tickets anyway!)
When all fails, just laugh!

By Heidi Roizen 2011 @ADF

Meetings

MEETINGS

- Why this meeting is needed?
- Starts – Ends at …
- Chairperson
- Taking notes (where do they go?)
- Decisions to be made
- Topics to be discussed
- What makes meetings frustrating / inspiring, efficient / waste of time, helpful / harmful …

Being late
Email, sms, call
Rotation
Files and storages
Documentation
Backups
Supporting activities

Talk to strangers
Safety comes first
Fail fast succeed sooner

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How to …
at DF

To get stuff
& services

Prototyping &
Thinking by doing

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Prototyping & Thinking by doing

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Design factories around the world

DESIGN FACTORY GLOBAL NETWORK

DESIGN FACTORIES LISTED BY YEAR OF FOUNDING

01 AALTO UNIVERSITY DESIGN FACTORY
Aalto University, Helsinki, Finland (2008)

02 SINO-FINNISH CENTRE
Tongji University, Shanghai, China (2010)

03 DESIGN FACTORY MELBOURNE
Swinburne University of Technology, Melbourne, Australia (2011)

04 DUOC DESIGN FACTORY
Duoc UC, Santiago de Chile, Chile (2012)

05 IDEASQUARE @CERN
CERN, Geneva, Switzerland (2014)

06 DESIGN FACTORY KOREA
Yonsei University, Seoul, South Korea (2015)

07 PORTO DESIGN FACTORY
Porto Polytechnic, Porto, Portugal (2015)

08 NEXUS DESIGN FACTORY
Thomas Jefferson University, Philadelphia, USA (2015)

09 FRISIAN DESIGN FACTORY
NHL Stenden University of Applied Sciences, Leeuwarden, the Netherlands (2015)

10 METU DESIGN FACTORY
Middle East Technical University, Ankara, Turkey (2016)

11 DESIGN FACTORY JAVERIANA BOGOTÁ
PUC Javeriana, Bogotá, Colombia (2016)

12 NYC DESIGN FACTORY
Pace University, New York City, USA (2016)

13 RTU DESIGN FACTORY
Riga Technical University, Riga, Latvia (Oct 2016)

14 UPV DESIGN FACTORY
Universidad Politècnica de València, Valencia, Spain (2017)

15 DESIGN FACTORY SÃO PAULO,
Universidad São Paulo, São Paulo, Brazil (2017)

16 DESIGN FACTORY NEW ZEALAND
Wintec, Hamilton, New Zealand (2017)

17 WARSAW DESIGN FACTORY
Warsaw University of Technology, Warsaw, Poland (2017)

18 FUSION POINT
ESADE, Universidad Politècnica de Catalunya and IED Barcelona, Barcelona, Spain (2017)

19 KYOTO DESIGN LAB
Kyoto Institute of Technology, Kyoto, Japan (2017)

20 CALI DESIGN FACTORY
PUC Javeriana, Cali, Colombia (2017)

21 INNO.SPACE
Hochschule Mannheim, Mannheim, Germany (2018)

22 UNIVERSITY OF TARTU DELTA SANDBOX
University of Tartu, Tartu, Estonia (2018)

23 SIT DESIGN FACTORY
Singapore Institute of Technology, Singapore (2018)

24 HAMK DESIGN FACTORY
Häme University of Applied Sciences, Hämeenlinna, Finland (2019)

25 ST. JOHN'S UNIVERSITY DESIGN FACTORY
St. John's University, New York City, USA (2019)

26 HANNAM DESIGN FACTORY
Hannam University, Deajeon, South Korea (2019)

27 SHENKAR DESIGN FACTORY
Shenkar College, Tel Aviv, Israel (2019)

28 OPER.SPACE
University of Bologna, Bologna, Italy (2019)

29 TECHNOVATION HUB
KU Leuven, Leuven, Belgium (2020)

30 DESIGN FACTORY LONDON
Brunel University London, UK (2020)

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Ready to know DF?