System Development International Project

Day 1

2019/2/25

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(Chikako Morimoto)

Lecture Outline

- Focus on the
  social value of computing system and software

- Aim is to
  learn business dynamics and software life-cycle through
  lecture and project-based learning (PBL)

- **What is a "Project" ?**

- **Output**
  - Team presentations: 3/1 @ 13:20-16:00
  - Mini report <Personal> : deadline 3/11 @ 23:50

Schedule

	Mon 2/25	Tue 2/26	Wed 2/27	Thu 2/28	Fri 3/1
	B226 (Suzukakedai)	**B226** (Suzukakedai)	**GSIC** (Ookayama)	**GSIC** (Ookayama)	**GSIC** (Ookayama)
10:45 - 12:15	Orientation **PBL** team building	**Lecture:** software quality and development process	**Lecture:** software quality and development process	**Lecture:** software quality and development process	teamwork
	lunch break				
13:20 - 14:50	**Lecture:** software quality and development process	**PBL** business idea lean canvas	**PBL** business model	teamwork	**presentations:** - product - fund raising *(demos)* - technical - process
15:05 - 16:35	teamwork	teamwork	teamwork	teamwork	

Evaluation

- **Project**
  - **Team** evaluation
- **Presentation**
  - **Individual** evaluation
- **Report**
  - **Individual** evaluation

Team Building
& Communication

Team building

- **Exercise**
  - Let's make your key item with….

  aluminum foil !
  - Illustration

Team building

- **Self-Introduction in each group**
  - 3 mins/person
  - Why do you take this class?
  - Experience of programming
  - Hobbies
  - What is your key item? Why?
  - …and more!

- **Important exercise to get soft landing in this "place"**
  - Relax
  - Open own mind

Team building

- **Introduce the next person to the class**
  - 1 min/person

- **Discuss these questions**
  - A) Did your partner introduce you correctly?
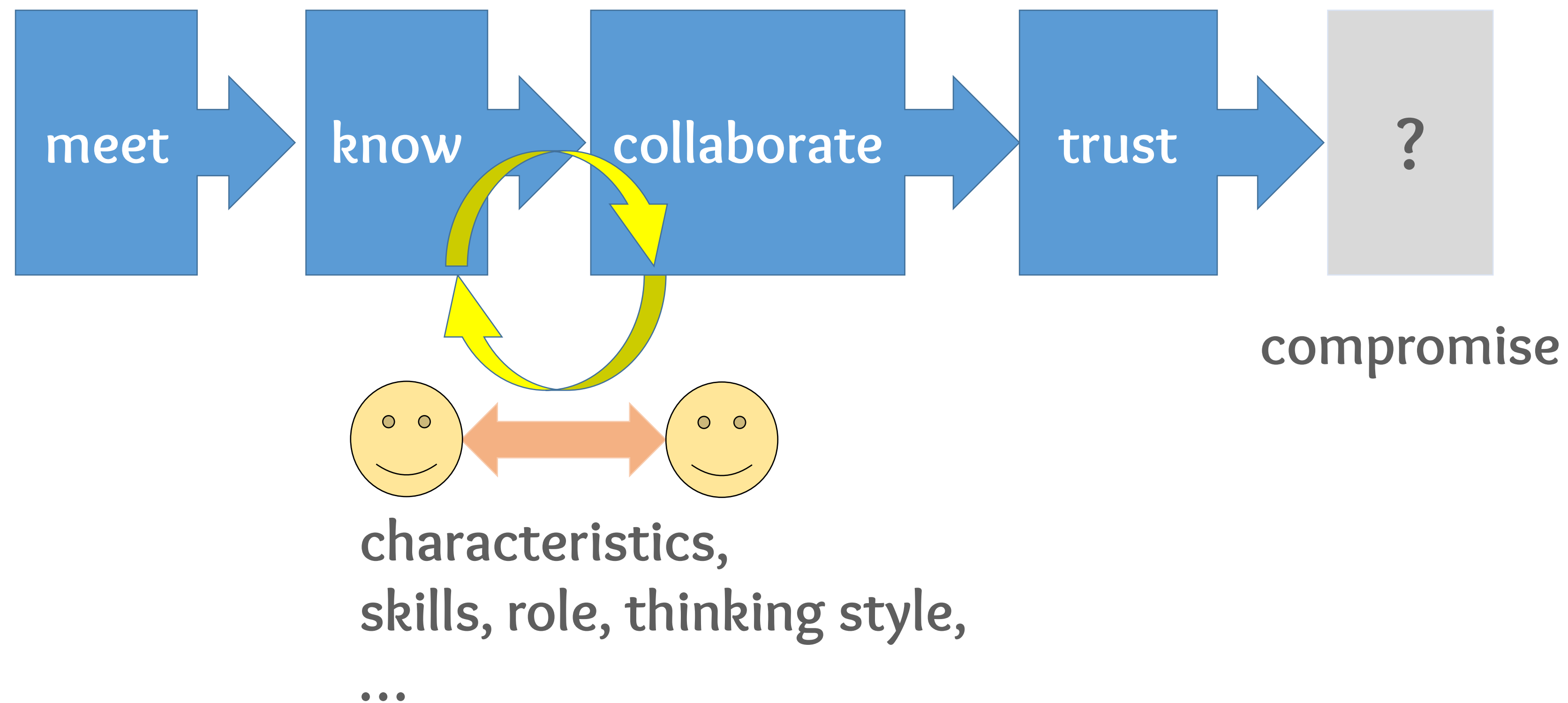 - B) Are you satisfied with how you introduced him/her?

Team building

- **Name your team** (10 mins)

Team building

- **Name your team** (10 mins)
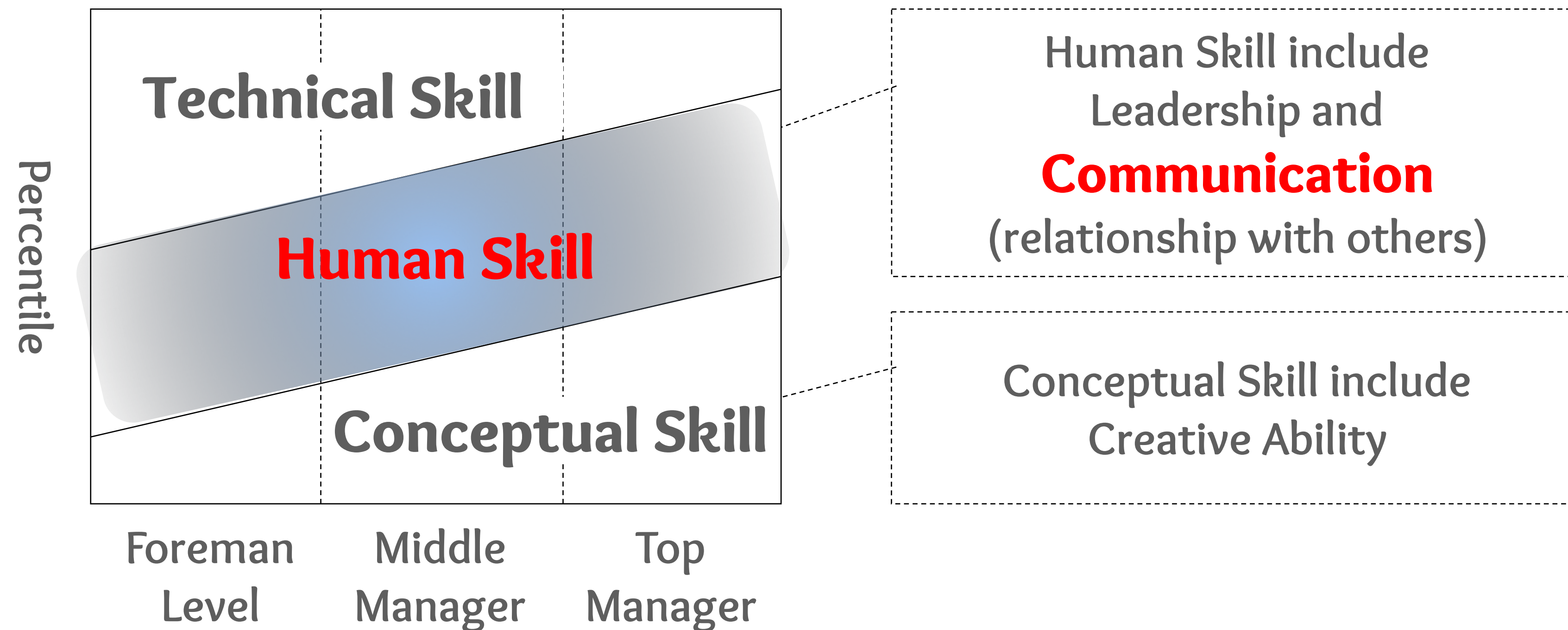
- **How did you come up with this name?**

Team building

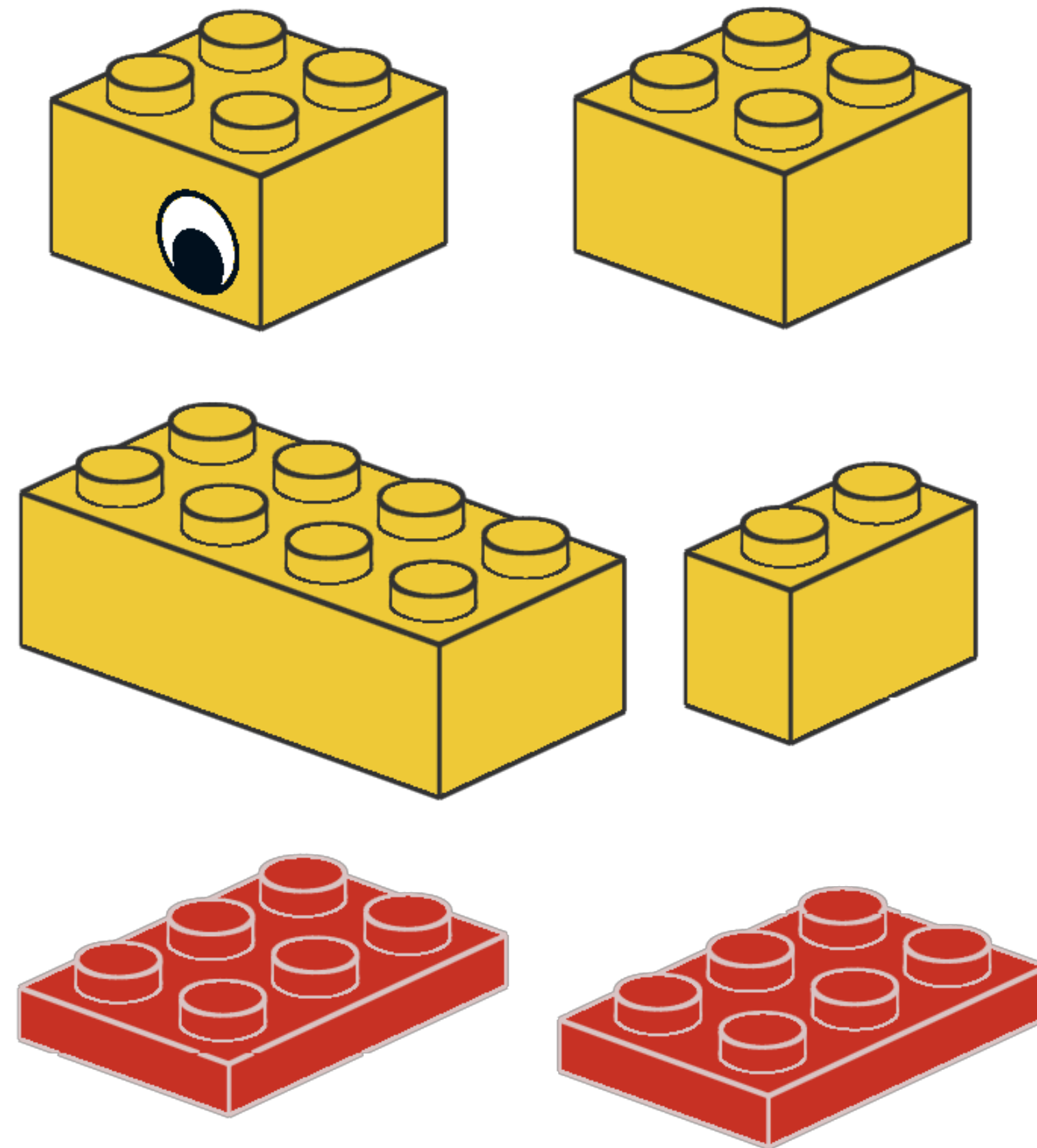- **Team building!**

- **How to build a trust relationship?**

meet → know → collaborate → trust → ?

compromise

characteristics,
skills, role, thinking style,
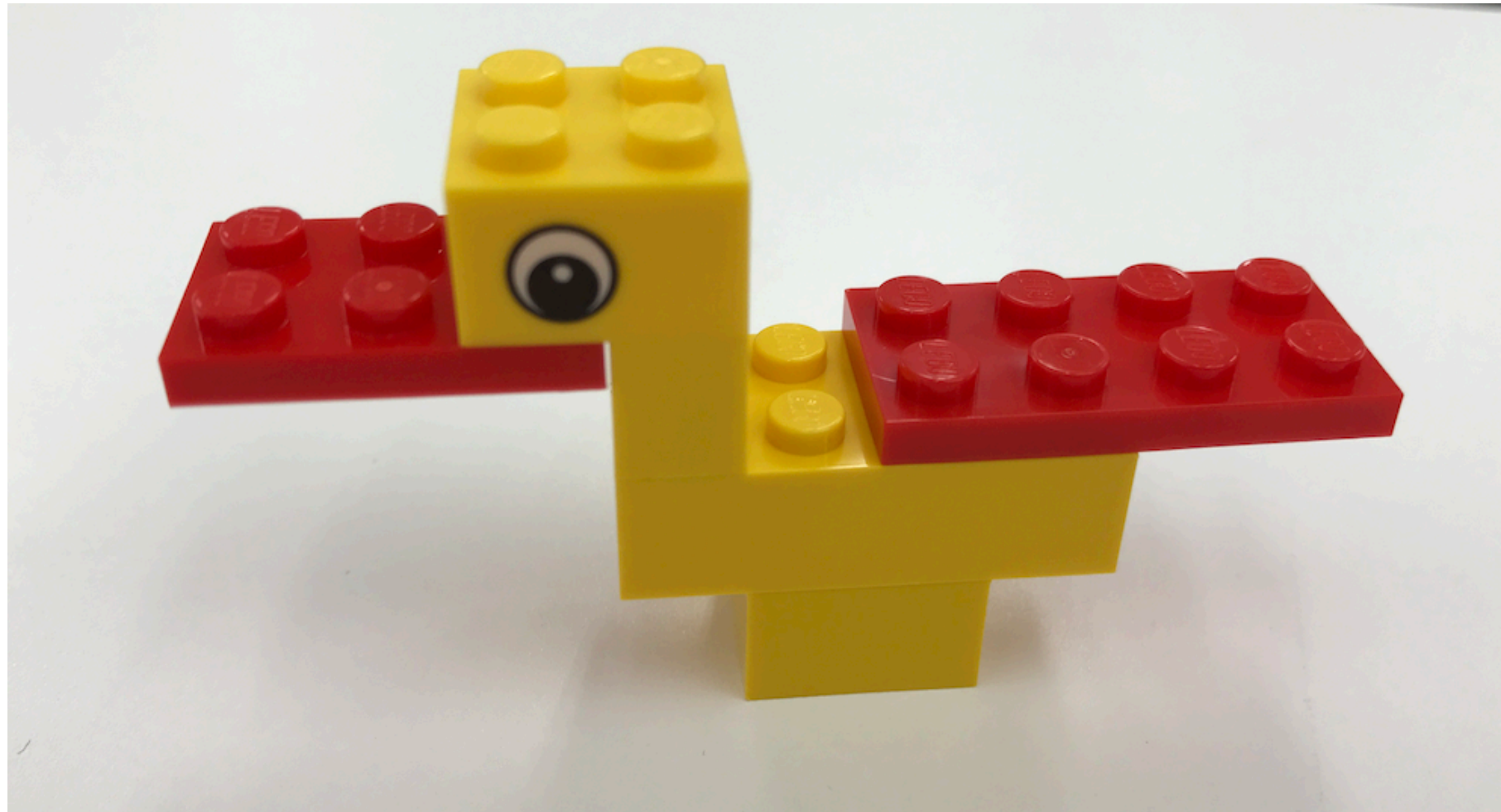…

Communication

- **Why communication is important?**

Kats, 1982

Communication

- **Make a Duck with LEGOs !**

Communication

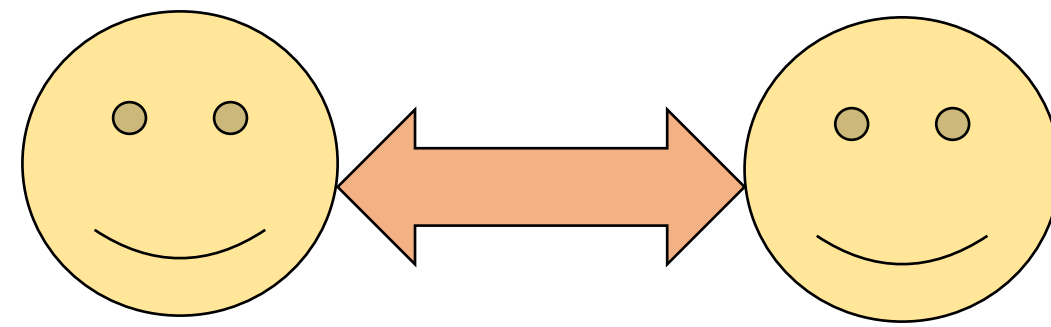- **Make a Duck with LEGOs !**

Communication

- **What communication style to persuade?**

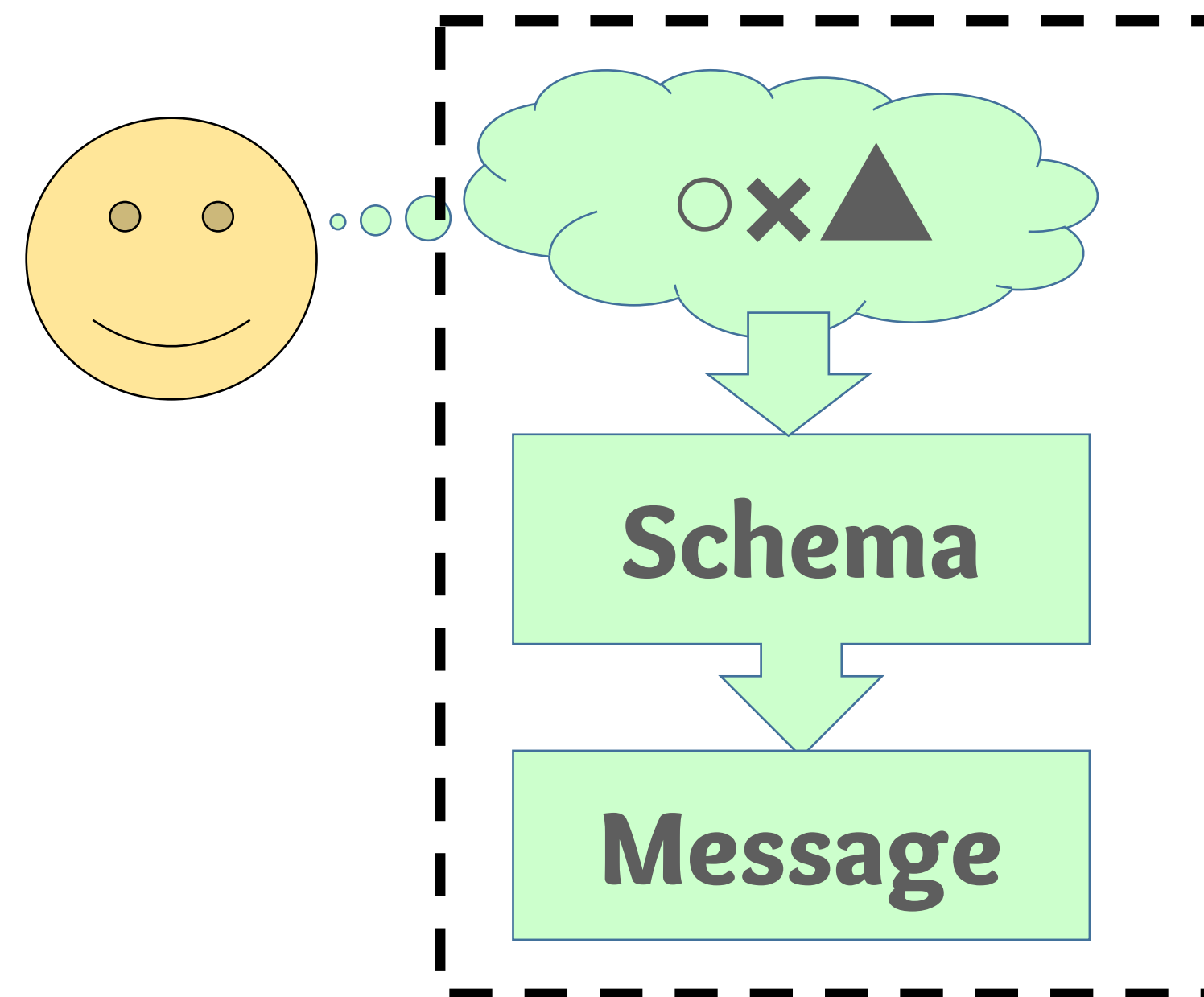- **What is your image of Ramen-Jiro?**
- **How about McDonald's?**
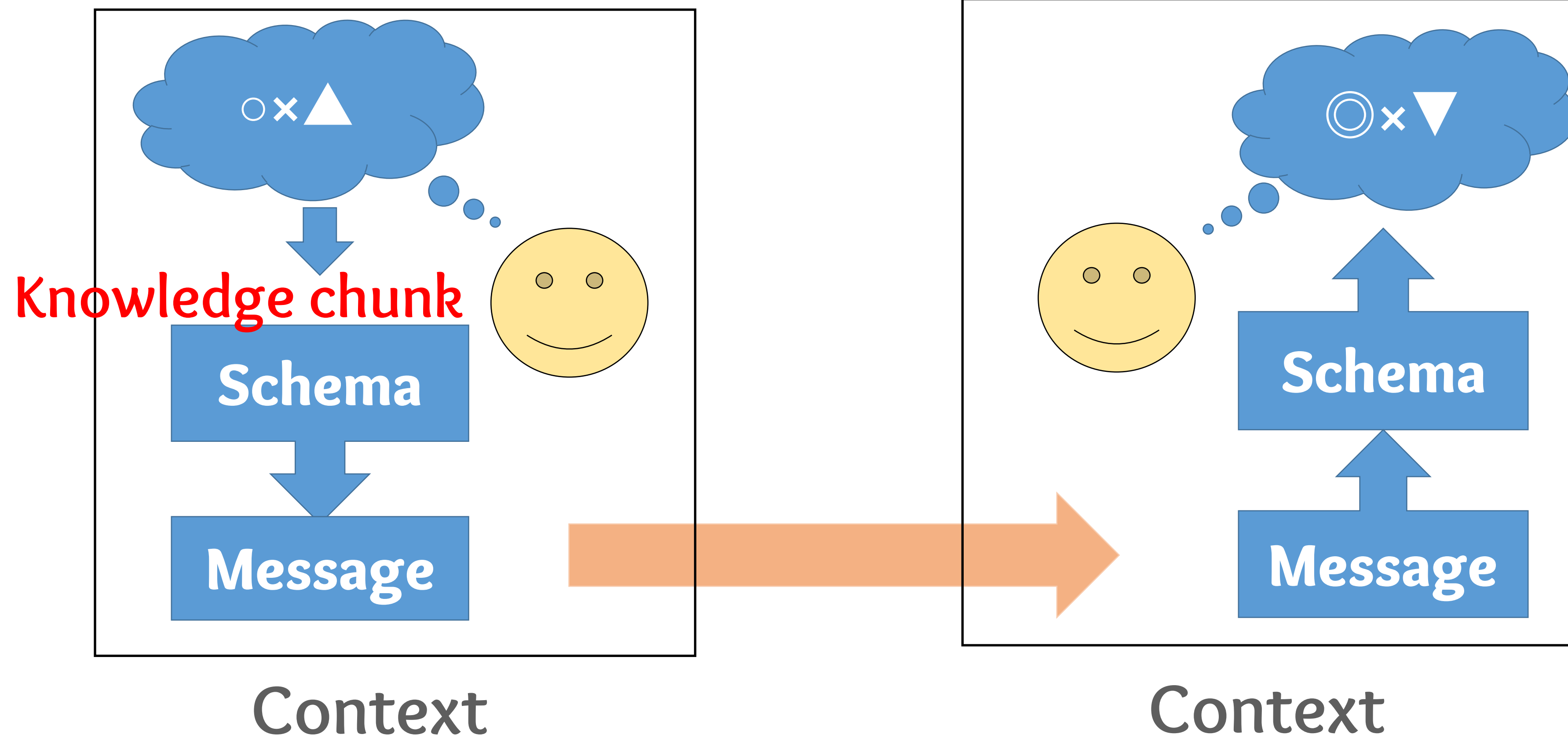
Communication

- Communication is **two-ways**

- But, we each have **our own protocol**

Schema

Message

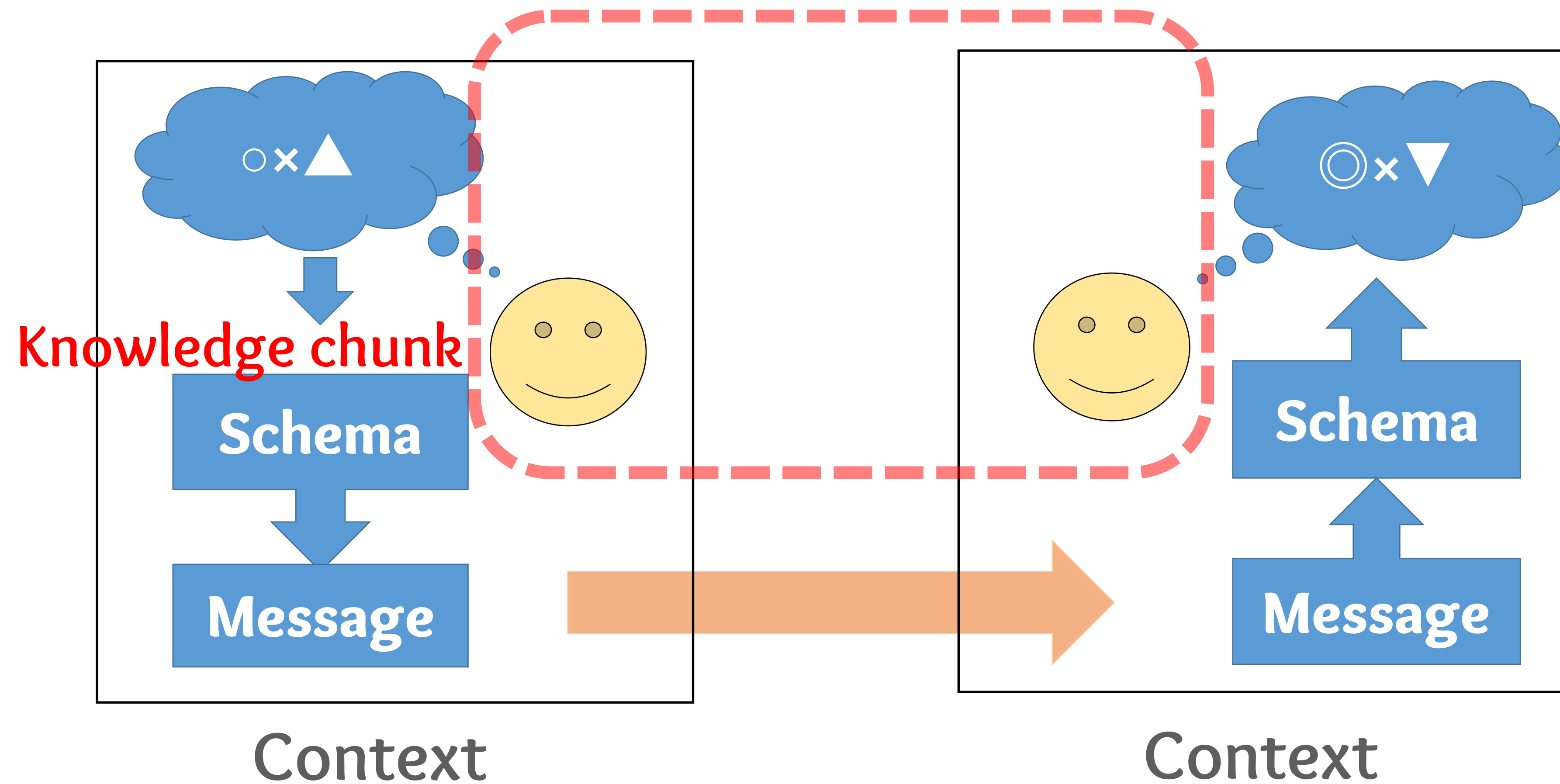We each have a schema
(knowledge chunk)
built from our
own experience

Team building

- **Communication**
  - Schema + Context

Knowledge chunk

Schema

Message

Schema

Message

Context   Context

Team building

- **Communication**

Common Context = "空気" mood

Knowledge chunk

Schema

Message

Context

Schema

Message
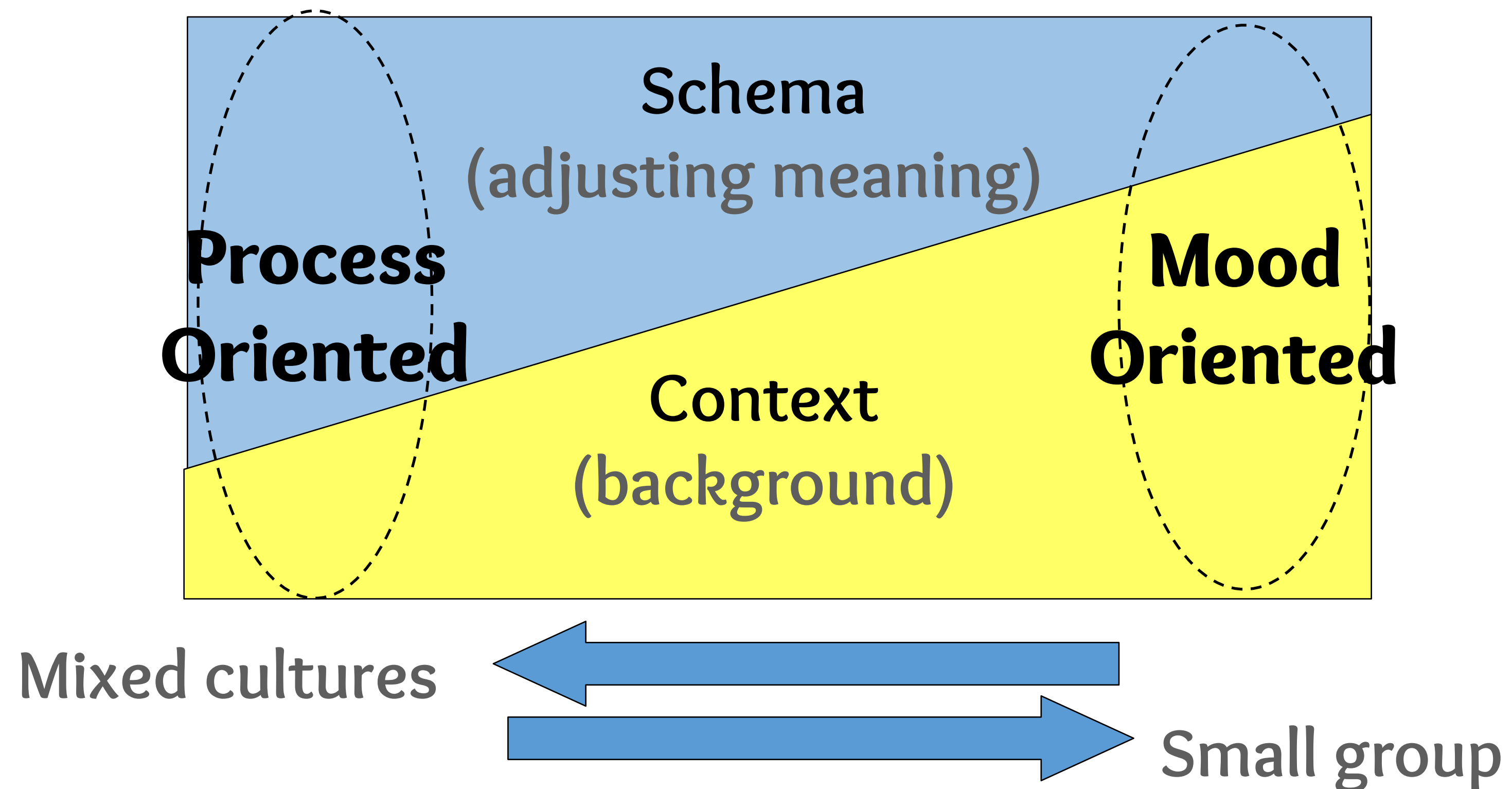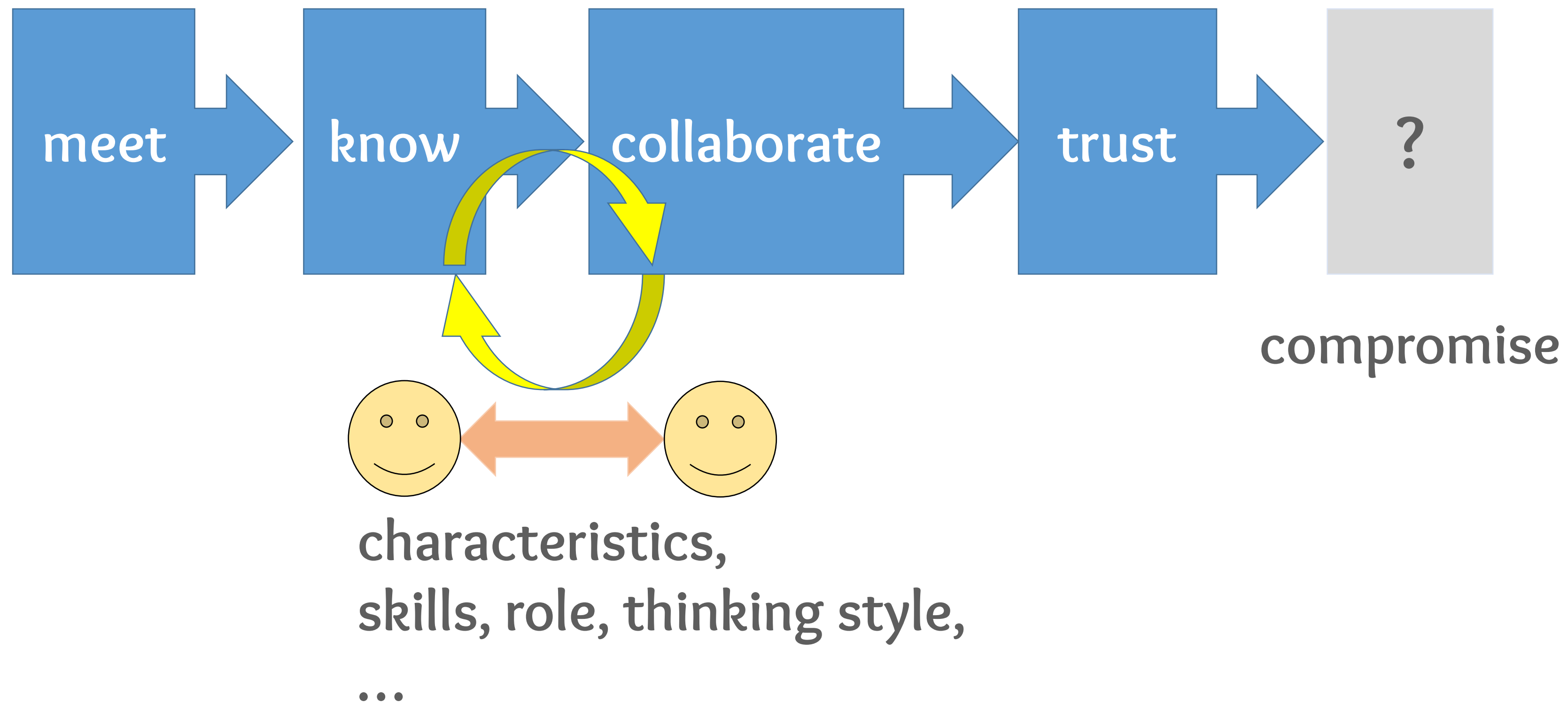
Context

Team building

- **Agreement Process**
  - Fair process
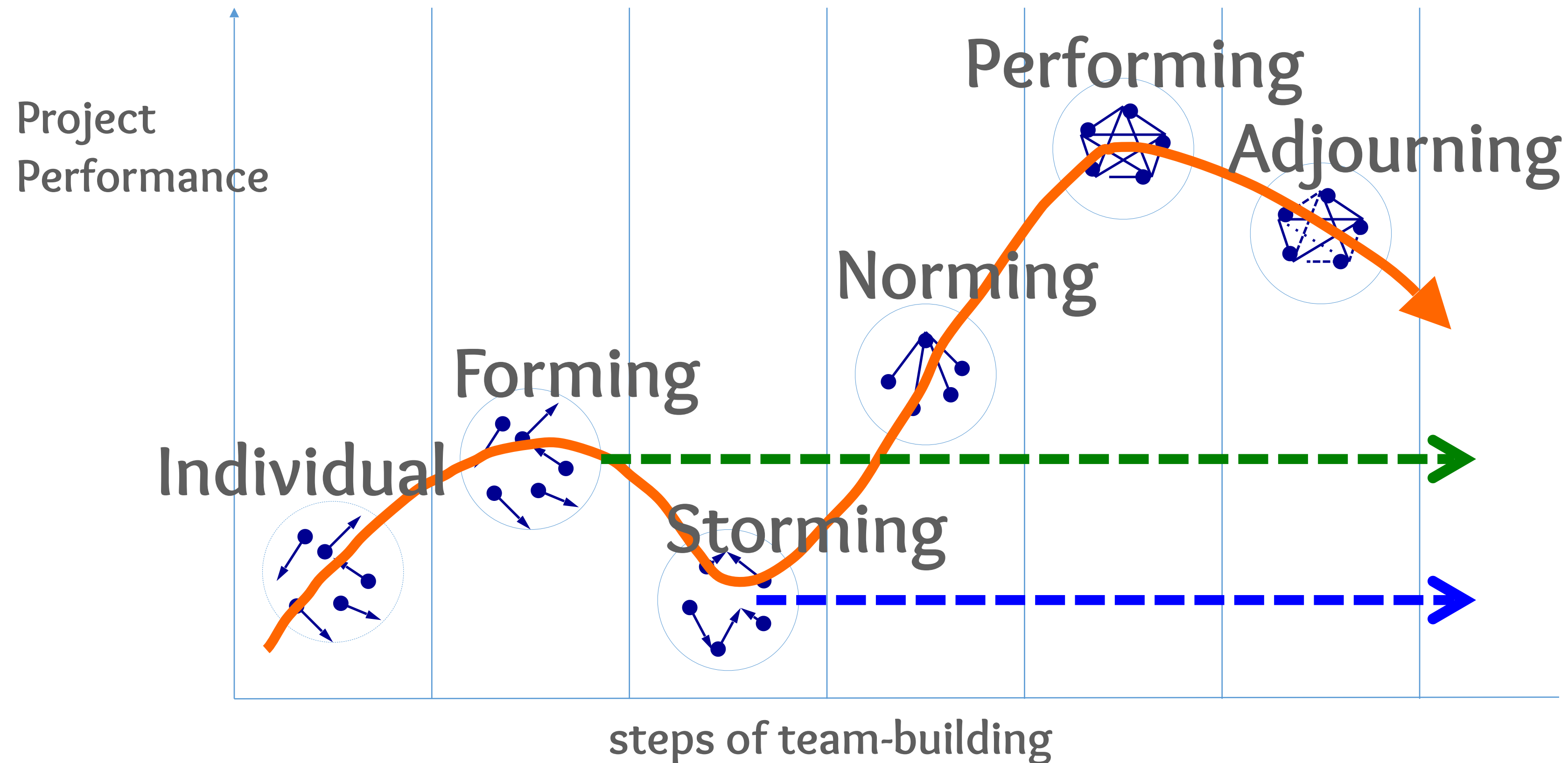 - Mood
  - Role

Team building

- **Team building!**

- **How to build a trust relationship?**

Team building

- ## How to build a trust relationship?
    - Team doesn't occur by itself, so we need to make team.
    - Tuckman's team-building model

Project Performance

Performing

Adjourning

Norming

Forming

Individual

Storming

steps of team-building

Enokida, Matsuodani, Society of Project Management, 2005

Team building

- **Project life**

Project
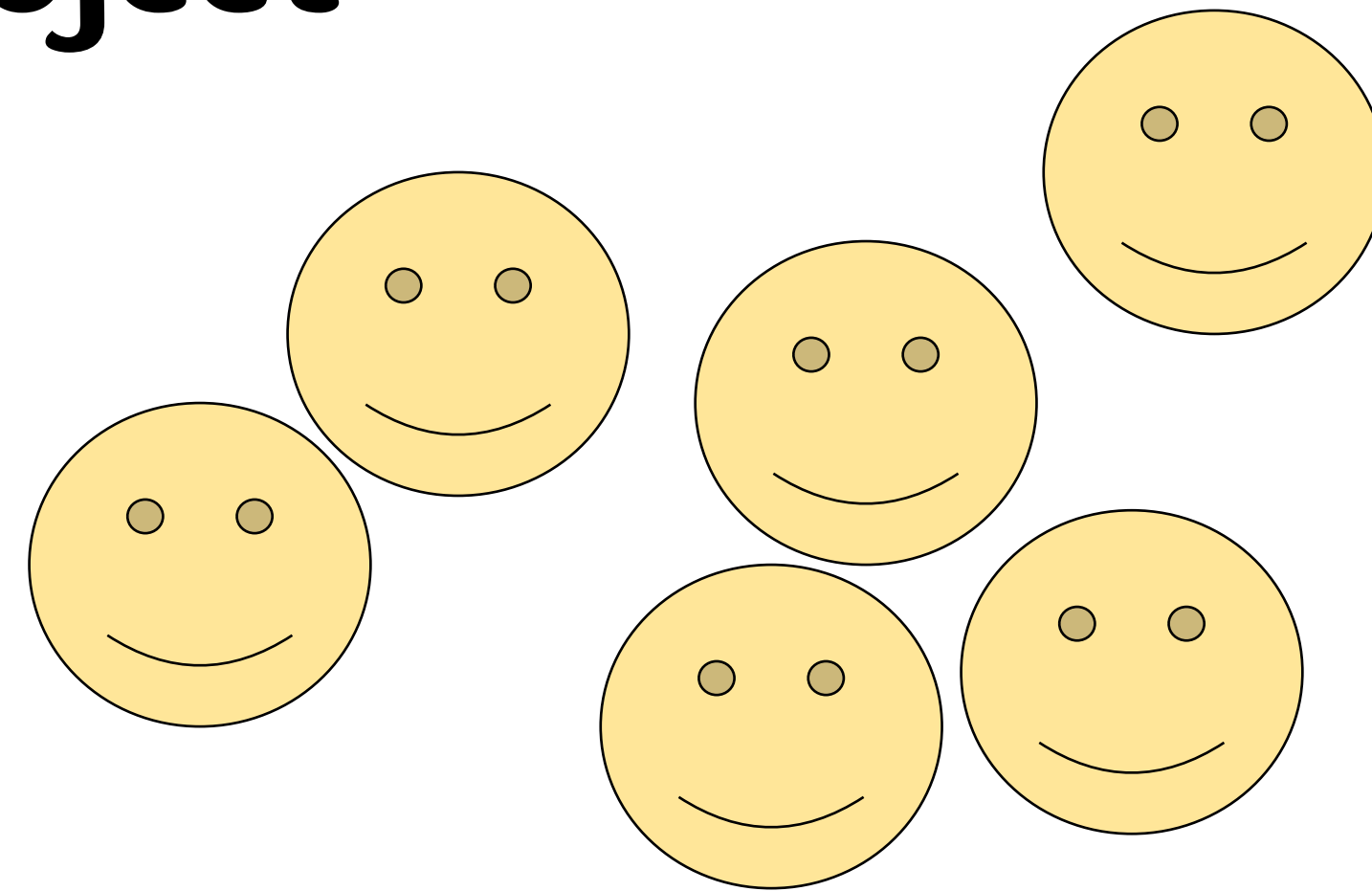Performance

steps of team-building

Team building

- **System Development Project**
  - Consensus-building process
  - A lot of stakeholders

- **Software – Hardware**
  - Flexibility
  - Simplicity

- **Team management** (people management)

- **Product management** (value management)

Team building

Introduce yourself again (2 min/person)

- **How will you contribute to your team?**
  - Who am I? – personality, attitude, …
  - What do I know / have? – knowledge, skills, …
  - Who do I know? – connection

Open your background!
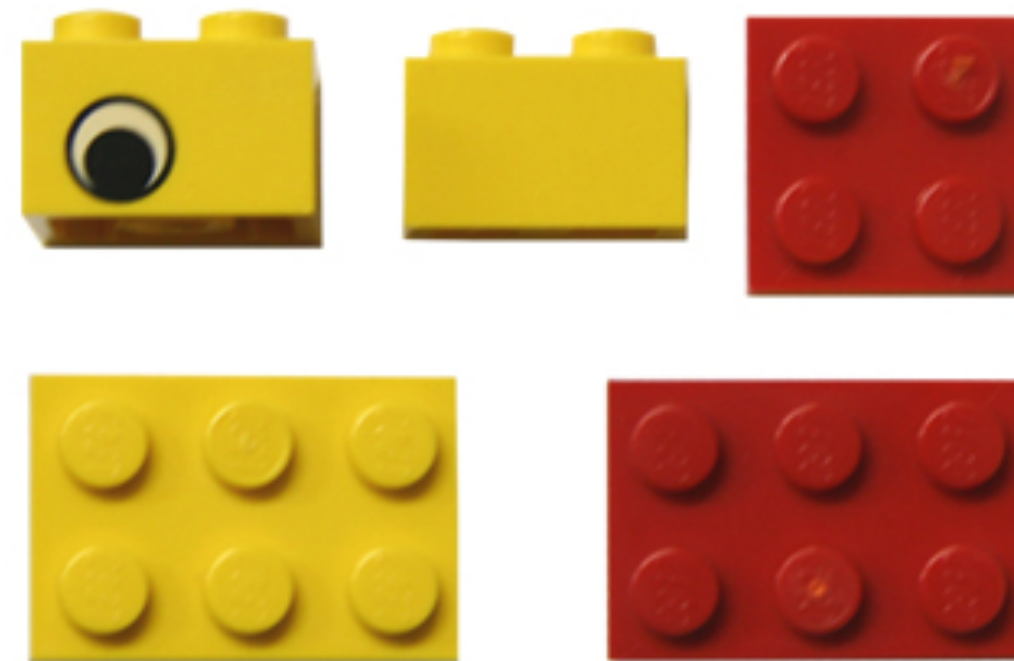
Diversity is important

NURTURE CURIOSITY
好奇心

Team building

Choose 1 piece of LEGO

Seal your name to your LEGO

Create your team symbol with the LEGOs

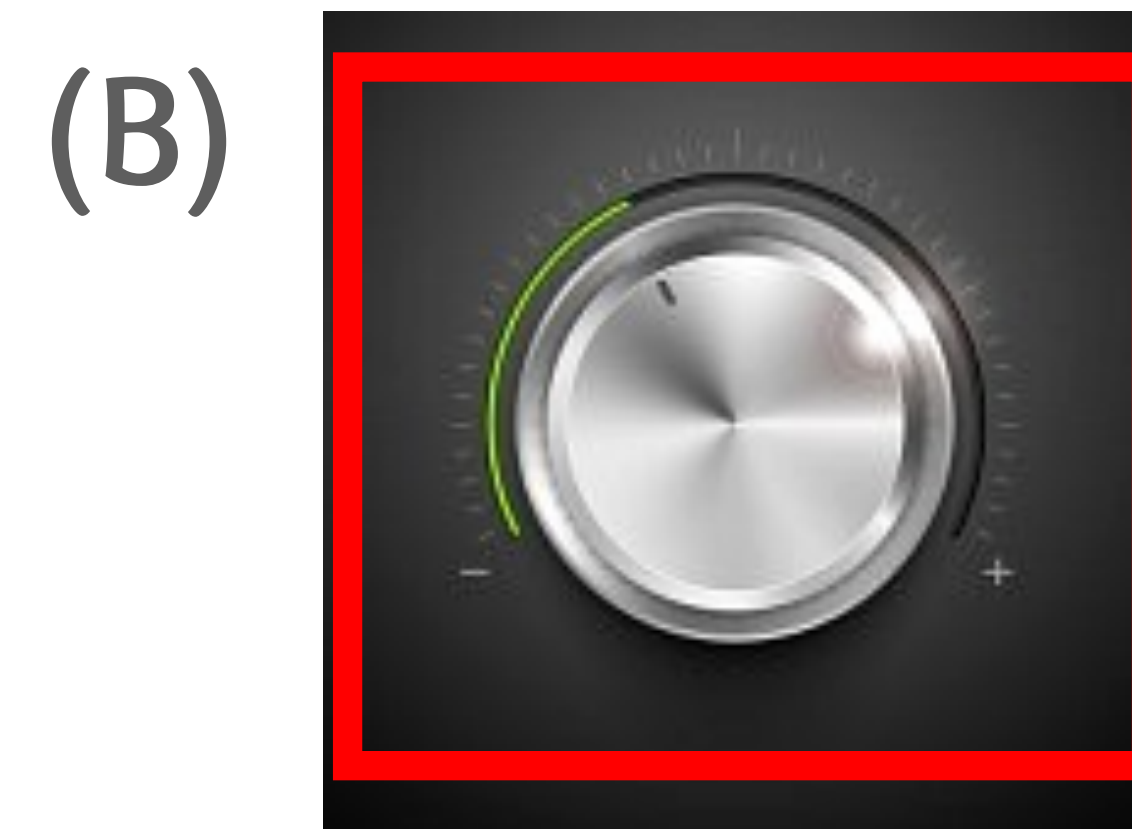# Social Value
& Lean Canvas

What is a "Software System" ?

- **Programs, Computer systems…**

- **What is a system?**
  - A system is a set of **interacting** or **interdependent components** forming an integrated whole.
    Every system is delineated by its spatial and temporal **boundaries**, surrounded and **influenced by its environment**, described by its **structure and purpose** and expressed in its **functioning**.

  - A **system also *influences*** its environment

- **What is the purpose of a system?**

Social value

- **Convenience**
- **Increasing something**
- **Reducing something**
- **Faster**
- **Cheaper**
- …and ?

Social value

- **Who is the user?**
- **Who is the customer?**

(A)

(B)

(C)

Social value

- **Who is the user?**
- **Who is the customer?**

Social value

- **Built a thing right**
  - Computer Science
  - Software Engineering
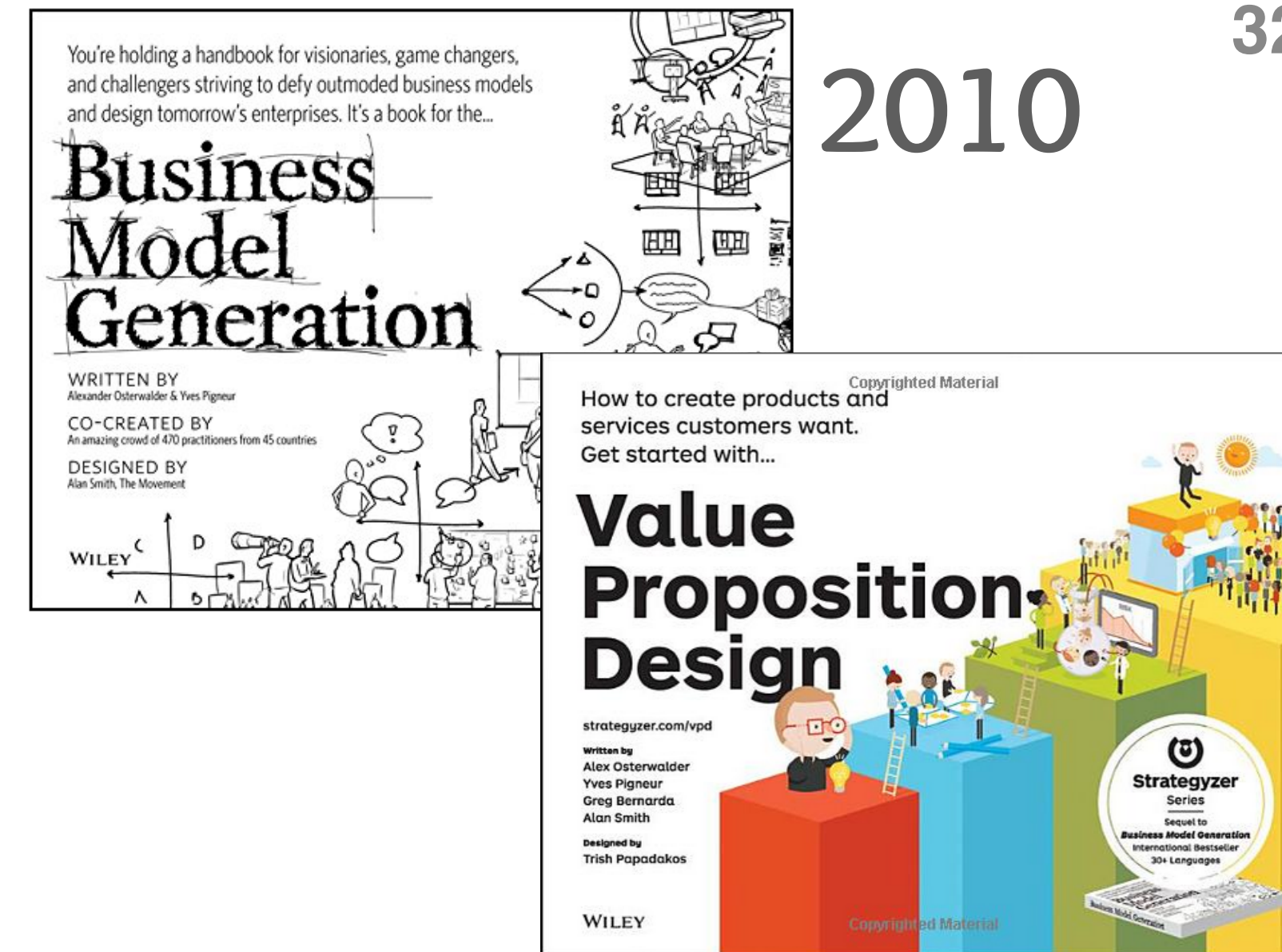 - Project Management

- **Built the right thing**
  - Business Model Analysis
  - Requirement Engineering

  - Lean startup (from business)
  - Agile development model (from development)
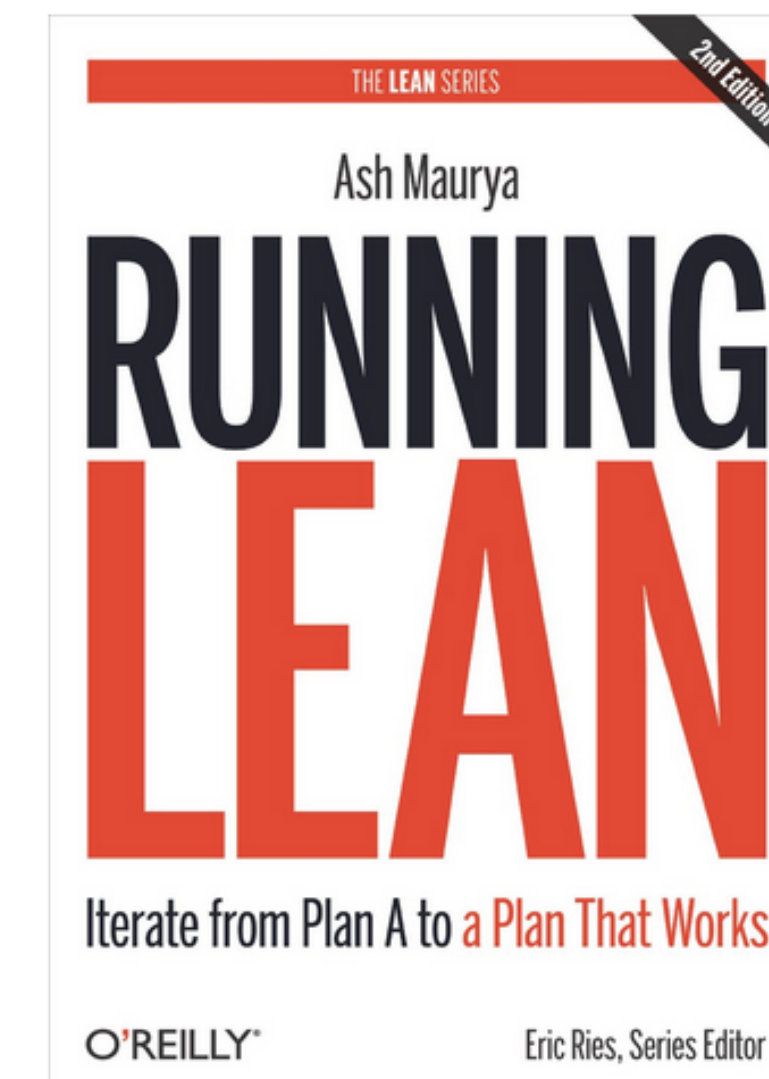
2010

Lean Canvas

- **Business model canvas**
  - Business modeling tool
  - "Value Proposition Design:
    How to Create Products and
    Services Customers Want"
    Alexander Osterwalder, Yves Pigneur, 2014

- **Lean canvas**
  - For startup business
  - Checking uncertainly ideas
  - "Running Lean: Iterate from Plan
    A to a Plan That Works"
    Ash Maurya, 2012

Lean Canvas

1. **Customer Segments**

2. **Unique Value Proposition**

3. **Channels**

4. **Unfair Advantage**

5. **Revenue Streams**

6. **Key Metrics**

7. **Solution**

8. **Problem**

9. **Cost Structure**

Problem	Solution	Unique Value Proposition	Unfair Advantage	Customer Segments
Business Models need to be more portable	1-page Lean Canvas	Helps startups raise their odds of success.	"Expert" Endorsements Personal Authority	Startup Founders (Creators)
Measuring Progress is hard work.	Progress Dashboard			Advisors/Investors (Collaborators)
Communicating learning is critical.	Sharing features	High-level concept: Startup Report Card.		Early Adopter: Book reader or workshop participant.
Existing Alternatives: Intuition, business plans, spreadsheets, business model canvas.	**Key Metrics** Create Lean Canvas Invite Collaborator Track Experiments		**Channels** 1. Blog, Book, Workshops 2. Startup Accelerators, Investors	
Cost Structure Hosting Costs: heroku (currently $0) People Costs: $5K/mo			**Revenue Streams** Bundled with book and workshops 30-day free trial @ $14/mo	

References

- **Lean Canvas**
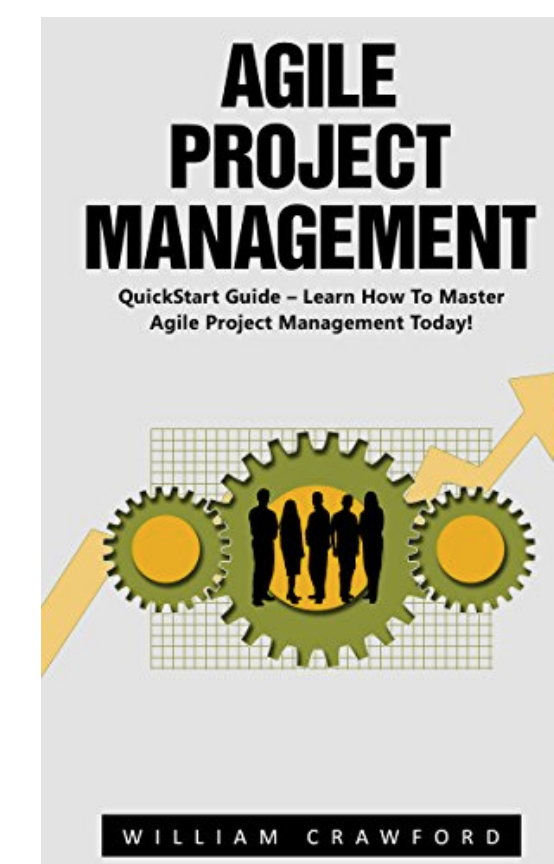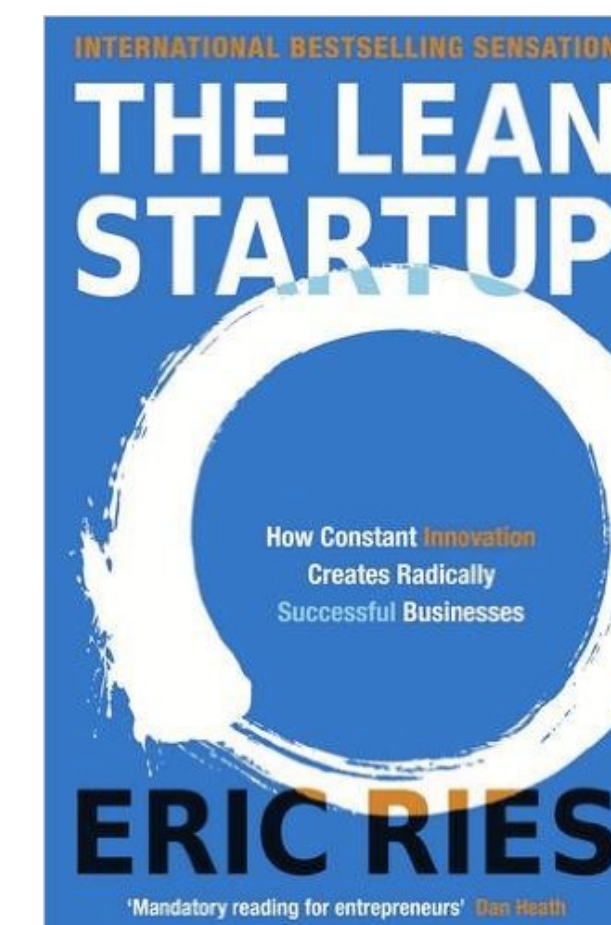 - http://www.slideshare.net/lfittl/lean-startup-essentials-startup-live-graz
  - The Lean Startup: How Constant Innovation Creates Radically Successful Businesses

- **Agile Project Management**
  - Agile Project Management: QuickStart Guide – Learn How To Master Agile Project Management Today! (Agile Software Development, Agile Development, Scrum) (English Edition)

- **http://www.itpro.titech.ac.jp/**
  - Project Based Learning (PBL)
    Photos

break

13:20~ Lecture

Software Quality and

Development Process

Social value

- **Built a thing right**
  - Computer Science
  - Software Engineering
  - Project Management   Quality Management

- **Built the right thing**
  - Business Model Analysis
  - Requirement Engineering

  - Lean startup (from business)
  - Agile development model (from development)