

# Challenges to Collaboration in Knowledge Intensive Work

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# Agenda

- Future of work and collaboration
- A focus on knowledge workers
- Challenges
  - Virtual and globally distributed teams
  - Multiple team membership and team fluidity
  - Co-creation in open innovation communities
  - Gigwork, platforms, and algorithmic work
- Final remarks



# Future of Work...



# **Future of Work** *and* **Collaboration**

# Future of Work *and* Collaboration

- Emerging **technologies** supporting collaboration
- **Flexible** work arrangements and new interactions
- The **physical space** for collaboration
- “**Blurring**” **boundaries** between organizations, units, teams
- **Globalization**



“Traditional” collaboration in teams



Virtual and Global Teams



Multiple Team Memberships



Co-creation in open innovation communities



Gigwork, platforms, and algorithmic work

# A Focus on Knowledge Workers

- Knowledge workers **apply** theoretical and analytical **knowledge**, acquired through formal **training**, to develop products and deliver services
- Examples: engineers, programmers, designers, system analysts, technical writers, accountants, architects, lawyers, physicians, scientists and more.

# Virtual and Global Teams



# Two Common Challenges in Virtual and Global Teams



Creating (and maintaining) relationships



Being on the same page

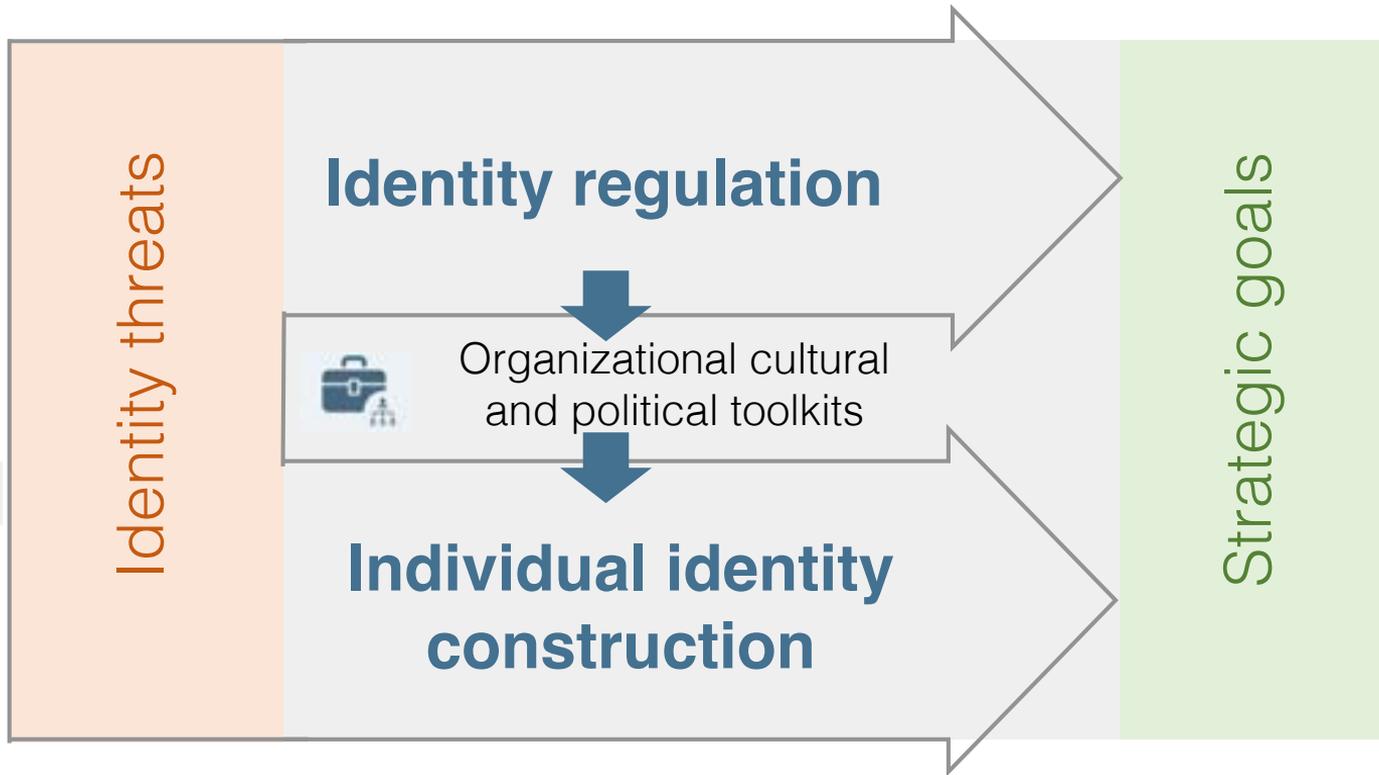
## Relationships

*The US client manager called up and said he wouldn't speak to anybody other than the Director. He said "These [offshore developers] are a bunch of guys who don't know what they are doing and they're screwing up every day, and so I am going to talk only to the Director."*

(Offshore project manager)

*Offshore, we feel that we've been made to do all the junk work.*

(Offshore team leader)



Koppman, S., Mattarelli, E., & Gupta, A. (2016). Third-World “Sloggers” or Elite Global Professionals? Using Organizational Toolkits to Redefine Work Identity in Information Technology Offshore Outsourcing. *Organization Science*, 27(4), 825-845.

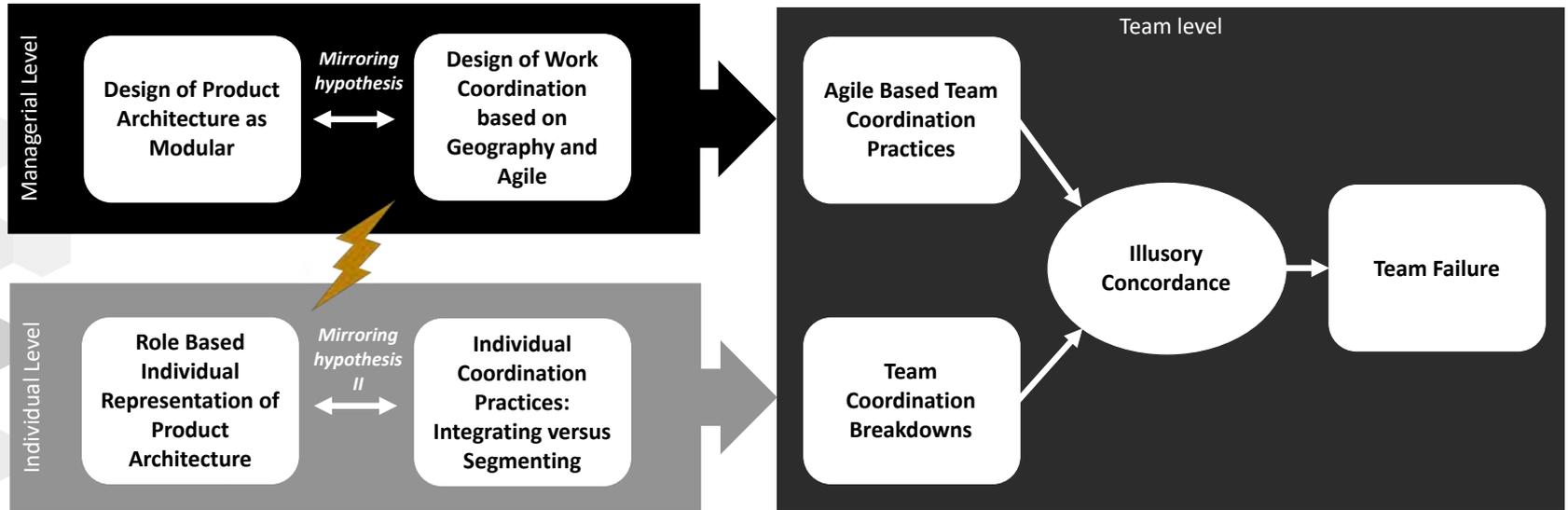
# Being on the Same Page

*[Flower-Net] is **very modular**, uses standards [...] There is no **need to have a lot of communication** between the person who owns [name of component] and the person who owns well ... Whatever.*

(Software developer from Boston, USA)

*I think we are **strongly connected**, because if you see it project-wise, there are multiple components and all **components are somewhere related with each other**.*

(Software developer from Pune, India)



Mattarelli, E., Bertolotti, F., Prencipe, A., & Gupta, A. (2022). The effect of role-based product representations on individual and team coordination practices: a field study of a globally distributed new product development team. *Organization Science*, 33(4), 1423-1451.

# Overcoming Challenges in Virtual and Global Teams is a Balancing Act

- **Brokering roles** across geographical subgroups
  - Facilitate codified knowledge sharing and perceptions of proximity (Eisenberg and Mattarelli, 2017; Mattarelli et al., 2022a)
  - ... but reduce shared leadership and tacit knowledge sharing (Mattarelli and Gupta, 2008; Mattarelli et al., 2022a)
- **Shared practices and norms:**
  - Glocalized practices facilitate virtual work acceptance (Mattarelli and Tagliaventi, 2009)
  - Shared norms contribute to a shared identity and common “logics” (Mattarelli, 2011; Annosi et al., 2022)
  - ... but can lead to illusory concordance and innovation failure (Mattarelli et al., 2022b)



# Multiple Team Membership and Team Fluidity



# Multiple Team Membership (MTM)

- **Multiple Team Membership (MTM)** – having people assigned to multiple projects simultaneously – increasingly common in organizations
- The majority of **knowledge workers** experience multiple team membership (more than 95%, according to some studies, e.g. Martin and Bal, 2015)

# Pros and Cons for Workers and Teams



- Efficient use of time and brainpower
- Sharing knowledge across groups
- Individual learning
- Promotion opportunities



- Competing priorities,
- Limited team cohesion
- Individual overload and stress
- Work life conflict

# MTM and Team Performance



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Bertolotti, F., Mattarelli, E., Vignoli, M., & Macrì, D. M. (2015). Exploring the relationship between multiple team membership and team performance: The role of social networks and collaborative technology. *Research Policy*, 44(4), 911-924



# MTM and Team Context Variety

When team members are part of multiple teams they typically switch between different contexts, e.g. different communication norms, different technologies, different tasks, different “social processes”



# Leadership Guidelines for MTM

## Team Leaders

- Map everyone's skills
- Manage time across teams
- Create a learning environment

## Organizational Leaders

- Track multiteaming through IT
- Promote knowledge flows
- Buffer against shocks

see Mortensen and Haas (2017)

# Do I know Who is in My Team?



# Co-creation in Crowd-Based Open Innovation Communities



# Crowd-based Open Innovation

In crowd-based open innovation:

- organizations invite a **diverse network** of external contributions via an online platform
- participants are encouraged to **collaborate** with each other in co-creation processes
- ... but ideas submitted have different levels of refinement and **quality**

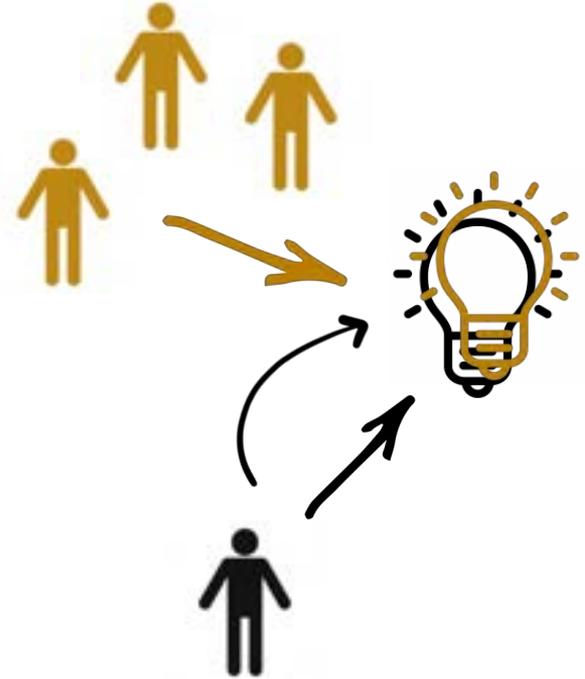
(Mattarelli et al., 2018, 2022)



# Unpacking Co-creation Processes

Participants “*interact, collaborate, vote for their favorite idea, discuss various topics by leaving comments on other participants’ pin boards, and learn from the aggregate knowledge and feedback of others*”

(Fuller et al., 2011: 262)



# Gigwork, Platforms, and Algorithmic Work



# Gigworkers in Online Labor Market Platforms: Future of Work?

- **Gigs:** short term projects or tasks for which (knowledge) workers are hired on demand
- **Gigworkers:** freelancers hired via online labor platform intermediaries
- **Platform algorithms:** match clients and gigworkers, control workers' behaviors, and establish performance

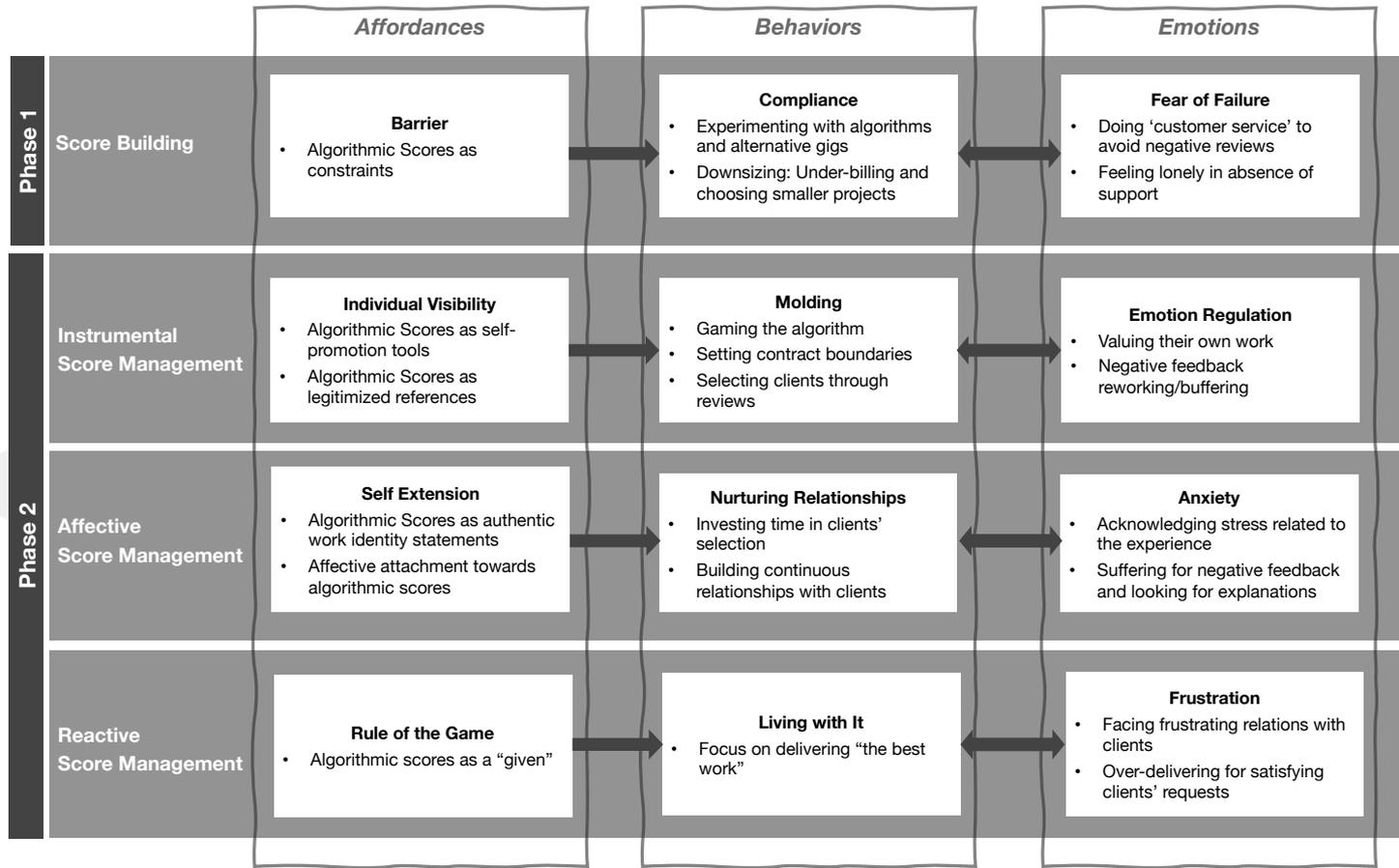


# Some Data

## Upwork Study (2021):

- Freelancers contributed \$1.3 trillion to the U.S. economy in annual earnings
- The share of workers who are non-temporary freelancers rose from 33.8% to 35.0% from 2020 to 2021.
- Skilled “remote” freelancing (gigworkers) grew in 2021
- Flexibility and freedom are key motivators for new and existing freelancers

**... Opportunity or exploitation? In control or being controlled?**



Bellesia, F., Mattarelli, E., & Bertolotti, F. Algorithms and their Affordances: How Crowdworkers Manage Algorithmic Scores in Online Labor Markets. *Journal of Management Studies*, forthcoming

# Collaborating in Online Labor Market Platforms?

Preliminary evidence on:

- Gigworkers developing **entrepreneurial identities** and managing teams (Bellesia et al., 2019)
- Gigworkers establishing **long-term collaborations**, working together (Idowu and Elbanna, 2021)
- New forms of temporary teams: **flash teams** (Valentine et al., 2017)

# Final Remarks



# Summary of Challenges to Collaboration in Knowledge Intensive Work

- Creating and maintaining relationships
- Being on the same page
- Creating roles, norms, and practices that support teamwork, but do not harm creativity/innovation
- Managing time across multiple teams
- Navigating different contexts
- Co-creating across boundaries
- Exchanging feedback across fluid boundaries
- Collaborating while dealing with algorithmic control



# paradox

- 1. A self-contradictory and false proposition.**
- 2. Any person, thing, or situation exhibiting an apparently contradictory nature.**



# The Future of Collaboration is about Paradox

- How to optimize **individual experiences** *and* **collective performance**?
- How to balance **autonomy** *and* **control**?
- How to establish **support** *and* **confrontation**?
- How to use **technology to keep employees connected** *and* to **seamlessly help them** so that it does not dominate their time?

Thank You!  
Questions?



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