



MICROTASKING

Session 2: Implications & Strategic
Perspectives, January 7, 2020

PRESENTATION



Enabling impact through
aggregate action

By Ana Matic

“We are becoming aware that the major questions regarding technology are not technical, but human questions.”

- Peter Drucker

THE NEED:
A GLOBAL SNAPSHOT



Microwork, Complexity + The Need for Collaborative Action

The global **rates and volumes of change** have been **increasing**:

- in technology, in economies, and experience
- bringing global challenges rooted in interconnected complexity.

The **predictability of our world** has **decreased**:

- causing potential solutions to become complex
- at times yielding further challenges
- and unexpected outcomes (Taleb, 2014).



Microwork, Complexity + The Need for Collaborative Action cont'd

In this complex time, we have the **specific opportunity** for, and **require**:

- new models to engage an unprecedented number of people
- to collaboratively act on upcoming global challenges
- in order to iterate on and tackle problems together.

The microwork model:

- Facilitates action
- is comprised of tiny, approachable actions
- that are distributed to, and undertaken by many workers,
- and pieced together to form a potentially impactful aggregate (Janah, 2009).

THE ANALOG

'WHY'

“...a little goes a long way”

- Anonymous



Prof. Wangari Maathai

The Green Belt
Movement (GBM)



Women, Trees and Impact: The Wangari Maathai Example

Wangari Maathai:

- born in 1940 in a Kenya village
- land was lush with farms, animals and rivers
- went to complete a Ph.D. abroad

By the time she returned:

- **deep environmental challenges** resulting in **arid desert climate**
- arguably a **complex problem** needing a speedy solution
- **ecological changes were triggered by soil erosion** > tree cutting
- Disputes over resources due to decrease in usable farmland



Lush to arid?



Women, Trees and Impact: The Wangari Maathai Example cont'd

To reverse soil erosion, decided to:

- **plant trees** and
- **organized a women-led movement** to do it

At first, the movement lacked momentum:

- people felt a sense of **'lack' in own abilities**
- **need for ecological change** and shortage of outside help
- education drove a gain in the volume of participants
- and increase in number of trees planted.



So...Let's Plant Trees

“Tree planting became a natural choice to address some of the initial basic needs identified by women.

Also, tree planting is simple, attainable, and guarantees quick successful results within a reasonable amount of time. These are all important to sustain interest and commitment. So, together we planted over 30 million trees.”

- **Wangari Maathai**



Women, Trees and Impact: The Wangari Maathai Example cont'd

End Results:

- **30,000 women** planted
- **over 30 Million trees**
- changed back the environment to lush and green

Also:

- Women gained **social status, abilities, and skills**
- Communities organized education and shared resources
- Wangari Maathai entered Parliament
- Won the Nobel prize for this work

THE DIGITAL SPHERE

**“You’ve heard of
software-as-a-service.
Well this is human-as-a-service.”**

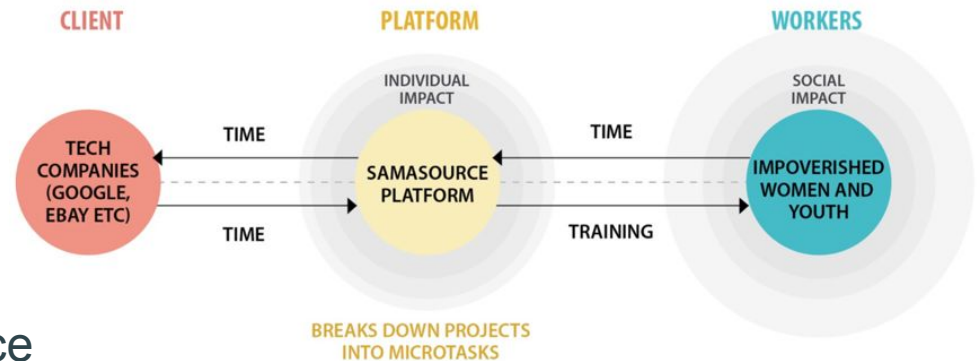
- Jeff Bezos



Collective Impact in the Digital Sphere

The Samasource Model

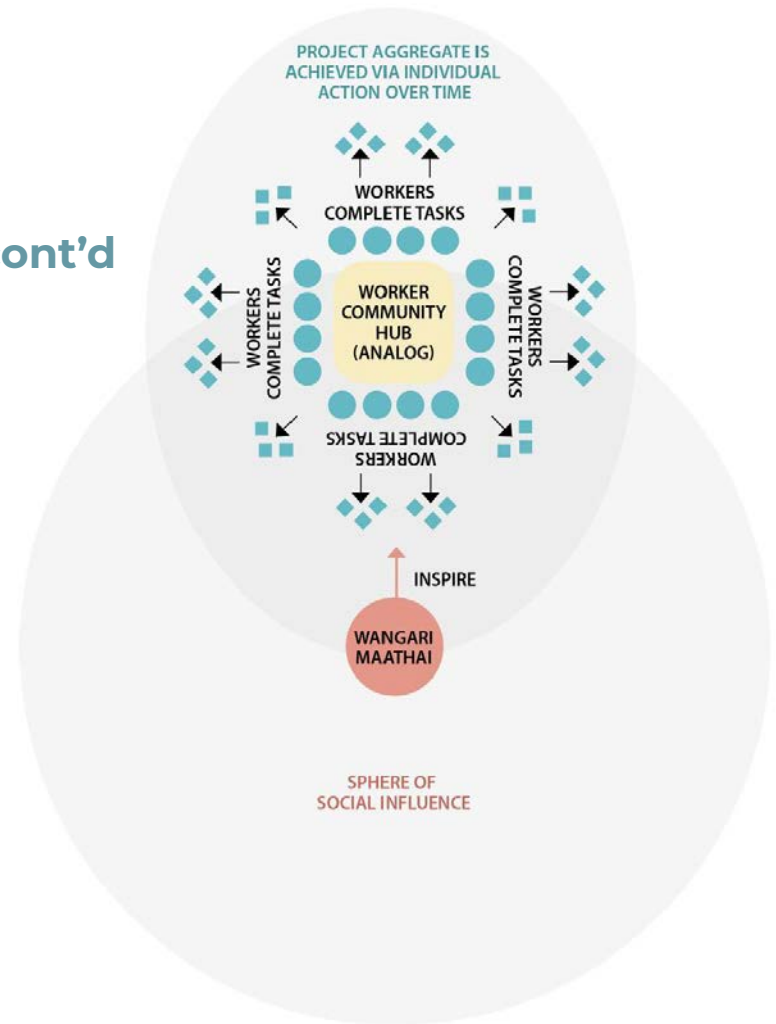
- data-driven projects
- tech clients ex Google, eBay Microsoft, and others +
- process data to microtasks
- offer to distributed microwork force



Collective Impact in the Digital Sphere cont'd

The Social Impacts

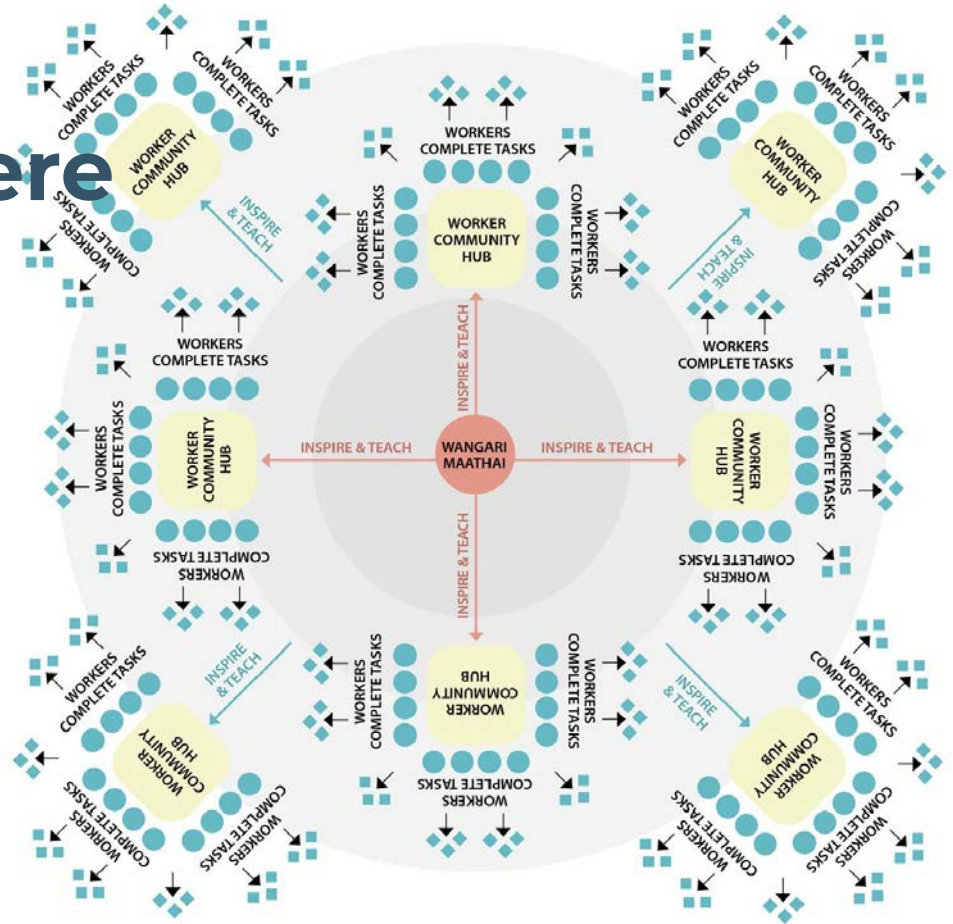
- workers gain **training and personal wealth** that can alter their lives
- and the lives of their families
- each person is able to improve their own situation



Collective Impact in the Digital Sphere

The Social Impacts

- **collectively they affect their social environment in a positive way**
- **by raising skills, knowledge and standards of living**



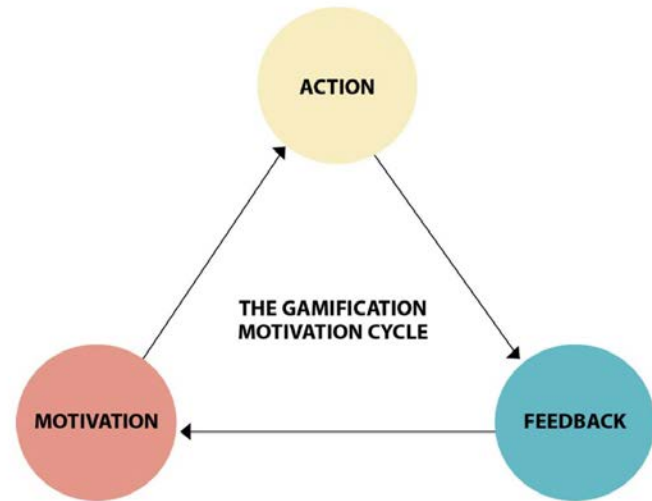


Elements of Gamification: What happens when we make it fun?

Most microwork platforms:

- focus on **simple task execution**
- lack elements of **fun**
- lack mechanisms for **gamification**
- lack game **dynamics**

A gamification mechanism that could be used to incite action can be depicted as:





Elements of Gamification:

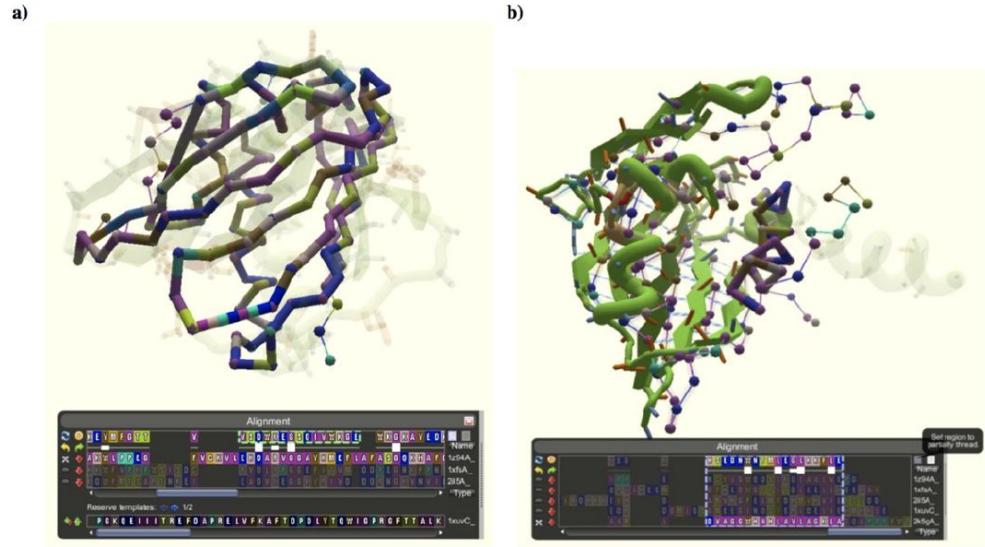
What happens when we make it fun?

We can improve microtask game play by:

- **Gaming Mechanics:** collecting quantifiable items like levels, points, or badges.
- **Gaming Dynamics:** such as reward and feedback loops, status features, quantified achievements and awards, can create tasks that engender 'fun play' activation
- **Human Emotion/Needs drivers** can create and incite microworker action, enable task completion, and mechanize return activity
- These mechanics have the potential to enable furthered play, and provide additional task meaning to microworkers and clients



Impacts of Gamification: Foldit Example



Supplementary Figure 1 Foldit screenshot of the Alignment Tool. The Alignment Tool allows Foldit players to load in different templates and manually move alignments. Players are then able to thread their sequence onto the structures of these known homologs. **(a)** When a template is selected, the aligned regions are represented as cylinders in the game while any unaligned regions are shown as spheres connected by lines; these graphical representations change in real time as players select residues and move the alignments around in the Alignment Tool. **(b)** During CASP9, Foldit players requested the ability to thread only a specific region from one template so partial threading was added to the Alignment Tool; this allows players to combine different regions from multiple templates into one hybrid model.

Figure #15: FoldIt Screenshot of the Protein Alignment Tool



Impacts of Gamification: The FoldIt Example cont'd

FoldIt (beta)

Created by the University of Washington's Centre for Game Science's collaboration with the Department of Biochemistry:

- gamified **microwork puzzle game platform**
- a salient example of gamified microwork mechanisms
- in real-world, applied aggregate projects
- offers hundreds of protein matching puzzles
- for players to solve on a free, volunteer basis



Impacts of Gamification: The FoldIt Example cont'd

FoldIt (beta) Outcomes:

- successfully engaged **thousands of users**
- to contribute to solving **over 1300 protein puzzles**
- and continues to expand its research of available games

- one example features an AIDS-related enzyme research project, a portion of which was solved via the FoldIt platform
- having **previously eluded researchers for over a decade.**

What might we...?



Social Business Model Canvas | Ana Matic

Microwork: Social Business Model Canvas

Key Resources What resources will you need to run your activities? People, finance, access, policy?	Segments Workers/Players	Value Proposition Worker Value Proposition What do the workers want to get out of their participation?	Aggregate Intervention What is the larger, combined project? What type of intervention is it?	Key Tasks What microtask batches are necessary? How will you measure social impact? When and how will you adjust course?
	Clients/Requesters	Client Value Proposition What do the project owners want to get out of this initiative?		
Key Partners Stakeholders Networks Who are the essential groups you will need to involve and/or impact? Do you need special access or permissions?	Beneficiaries Who are the people or organization who are affected by this intervention?	Channels How are you engaging your workers? How are you reporting to your clients? How are you reaching your beneficiaries?		
Cost Structure What are your biggest expenditure areas? How do they change as you increase task complexity, and/or scale up?		Gifts + Surplus How will you gift and invest the profits?	Revenue Break down your monetary revenue sources by % What are the non-monetary sources of revenue (ex. research etc)?	

Inspired by the Business Model Canvas

A dense field of green LEGO bricks, viewed from a slightly elevated angle, creating a textured, repetitive pattern. The bricks are scattered and oriented in various directions, filling the entire frame. Overlaid in the center is the text "Thank you" in a clean, white, sans-serif font. The lighting is soft, highlighting the individual pieces and their interlocking shapes.

Thank you



MICRO**TASKING**

Thank you!
microtasking.ca