STARLab
Socio-Technical Action Research Lab

Designing a Digitally Enabled Prototype—Jointly-optimized Social and Technical Work System

Rob de Wit (Shell); Carl Watson (Microsoft); Scott Stussi (BASF); Nitin Sethi (Interglobe); and Bill Pasmore (CCL)

INNOVATION RESOURCE CENTER for HUMAN RESOURCES
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HIGH LEVEL FRAMING OF THE JOINTLY-OPTIMIZED SOCIAL AND TECHNICAL SYSTEM DESIGN CHALLENGE

A core concern of the STARLab work has been the "technological lead, social lag" problem. Technological advance is hurtling forward; our social technologies have not kept up. New work systems are being configured around a network of digital platforms into which are built algorithms and routines for coordination, artificial intelligence and machine learning, and advanced analytic capabilities. They provide much integration and guide decision making, as well as enable efficient execution. Organizations are proceeding with the adoption of these systems because the technology exists and because they fear that not doing so will disadvantage them competitively. There is inadequate concern for creating the optimal combination of social/human and technological factors.

Especially with respect to ways of working, technology is displacing/replacing managers and workers at all levels, augmenting work, and often creating entirely new occupations. For the customer, this transition may involve a more responsive but less relational interface.

Using the new assumptions and prioritized polarities from the previous activity as design criteria, and Galbraith's Star Model™ as a template, your group will address how elements of the organization's design can help assure that both the technological and social impacts of this transition are addressed and to support the value that the organization delivers to its various stakeholders. Think in terms of the future organization, where competitiveness will depend on optimal incorporation of digitization to ensure viability.

Your assignment:

[1] We gratefully acknowledge the support and funding for this project from Innovation Resource Center for Human Resources (IRC4HR®)

1) Start with a high-level, generic picture of an organization's value stream and managerial value add.
2) Where does responsibility for socio-technical optimization lie?
3) Describe the high-level governance and management processes (e.g., goal setting, review, decision making) required to monitor socio-technical outputs?
4) What substantive elements of the organization will be involved in determining whether the digitalized world is optimized for technical/operational performance and human well-being—and to ensure that the capacity to leverage human creativity and create meaningful work are addressed?
5) How will your design decisions about the various elements of the Star Model™ (e.g., decisions about management and work processes and how digitization will be incorporated into them, changes in leadership roles, capability development, rewards/recognition) impact the capability for socio-technical optimization?

The group began, as instructed, by creating a diagram that captured the value stream from vision to organization design, as illustrated in Figure 1.

Figure 1.

<table>
<tr><td>Vision & Purpose
(Driven by customer needs)</td><td colspan="2">Business Model</td><td>Operating Model</td><td>Organization Design & Talent Model</td></tr>
<tr><td>Translate into tangible action</td><td colspan="3">Authorized ability to change components of the system</td><td>Foster skill development</td></tr>
<tr><td colspan="5">Collaborate, communicate and share</td></tr>
<tr><td></td><td colspan="4">Outcomes and KPIs</td></tr>
</table>

The first "principle" underlying the formation of this model was that the vision & purpose of the company, and everything that follows in terms of organization design should be driven by customer needs. The team felt it made no sense to jointly optimize a system without paying attention to the purpose it ultimately serves.

The second "principle" is that the vision and purpose of the organization should evolve as the needs of customers evolve. By extension, this means that the organization design will also change over time. The mindset shift accompanying this realization is that *organization design is not a "from-to" exercise but in fact is continuous and never-finished*.

The third "principle" underlying this framework is that while the authority of leaders is preserved, *leaders authorize others to lead as the situation demands*. Rather than making decisions without a complete understanding of what is happening at the interface between work activities or between the organization and its customers, leaders should define the overall criteria for success and then allow those at local levels to influence how the system is designed and operated. At the same time, the responsibility lies with individuals and teams to influence upward when the need arises. As they provide feedback and input, processes are in place to insure that leaders listen. The idea is "freedom within the framework;" that is, that individuals and teams are given broad authority to make changes in how work is done within certain limits established by leadership. This allows people at all levels to control variances (errors, undesirable problems, misdirected effort, etc.) in service of the customer's requirements.

The processes that are put in place to allow individuals and teams to influence leadership are "dialogic" in nature. This means that the parties make time to discuss what is happening using structures that maintain the sanctity of two-way communications and the equality of influence until the problems are understood and solutions are proposed. In the end, in order to avoid chaotic shifts that are not well thought through in terms of their impact on the larger system, leaders are tasked with making the final decision. We should note that some people in the group felt that the dependence on leaders to make decisions would wane as networks became more capable over time.

Input: New Assumptions and Polarities

Based on prior work by the community, a list of "go-forward assumptions" and prioritized polarities to be addressed were given as inputs and assumptions to the task.

Go Forward Assumptions

- Continuous learning for adaptation drives long-term value
- Organizational structure is less about hierarchy and more about the work that needs to be done
- Digitalization can drive higher impact business outcomes with lower risk
- Collective insights that can be executed will drive value
- Organizational models cannot be a one size fits all, but needs to flex across business units/teams.
- Vision and purpose are the new long term planning

Incorporating digital capabilities into the way organizations operate requires changes in fundamental assumptions that fit with old ways of operating and hold these old ways in place. STARLab participants identified six critical "Go-Forward Assumptions" that will be required to inform new designs and will be required to unleash new capabilities and behaviors.

Critical Polarities

- Responsiveness ⟷ Efficiency
- Replacing Talent ⟷ Augmenting Talent
- Value Creation (Change/Impact on Global Outcomes) ⟷ Value Extraction (Benefits to my Organization)
- Personal Orientation ⟷ Collective Orientation
- Intuitive Decision-Making ⟷ Measured Decision-Making
- Not Either/Or → Requires Being Adaptable/Dynamic

All organizations have to create the right balance of some key polarities/tensions (such as between short and long term performance focuses) in order to perform effectively. STARLab participants identified six polarities that are strong tensions that have to be addressed to incorporate digital capabilities into their business models and organizational logics.

Design Ideas Generated by the Group

Strategy: The strategy would begin with a clear initial formulation of the vision and intentions of leaders. Thereafter, the vision and strategy would be formulated with the input from multiple constituents, including inputs from customers, on a continuing basis. The group felt strongly that the strategy should be "living" rather than completed once a year or once in five years.

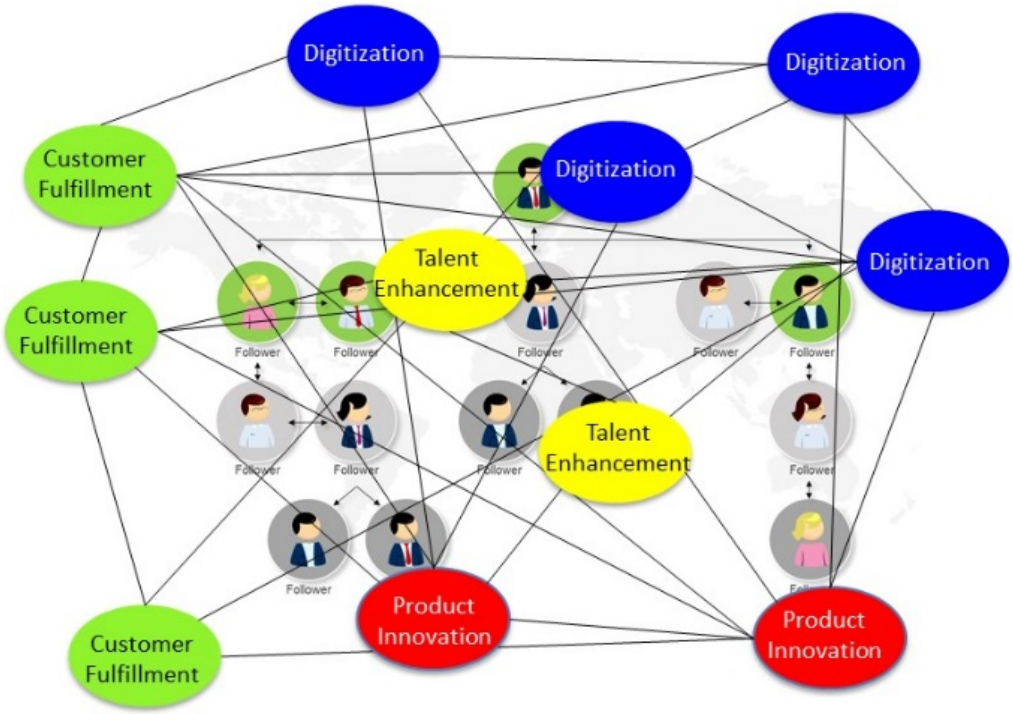
Work Processes: Given the importance of continuous change in the strategy to meet evolving customer needs, it follows that the design of the organization and work processes should also be constructed in ways that allow them to evolve with minimum friction. Two key ideas were offered in this regard. First, the idea of "built in slack time" was offered to enable people to take the time needed to understand the customer and help realign the organization to shifting customer needs. This realignment could be a relatively minor refocusing of priorities to a major shift in the business model. The proper application of slack time was considered necessary for *agility enablement*. Further, it was recognized that the need for slack time would vary by position and over time, instead of the "10% rule" that some companies have adopted for everyone.

Second, the group felt strongly that the organization could not adapt readily if technology wasn't used properly to connect decision makers in the hierarchy and network. *This is the point where digital technology changes what is possible in organization design*. Joint optimization, in this regard, refers less to making work palatable for people who work with machines and more to making work purposeful and meaningful by allowing people, through digitally assisted networks, to influence decisions collaboratively in service of the broader purpose: to serve the customer.

Structure: As might be expected from the above, the group saw the emergence of networks as a *primary and intentional* feature of organization design rather than as an unplanned consequence of needing to close gaps between people and units in traditional hierarchical design. In fact, it was strongly suggested that the networks designed to manage interdependent work processes should become the visible representation of structure with the traditional structure fading into the background, activated only when necessary to break ties, establish new directions or set new operational requirements (see Figure 2 below, which depicts the formal structure in the background of the primary network, which has become the "new" organizational chart). Here again, it was imagined that digital technologies could be

invented that would allow members of networks to know when problems were arising that required the network to meet and resolve them.

Figure 2.



The idea is to make the structure more dynamic, enabling it to respond new opportunities as they arise instead of having people trapped in roles that force them to remain focused on yesterday's priorities. We discussed the idea that networks are not uniform but instead vary in how they operate depending upon their membership and purpose. Designing the right networks to fit the purpose of the networks is a skill that is in need of development.

Management Processes and Rewards: Governance processes received special attention during the discussion. Since the organization design is expected to evolve constantly, the networks that make decisions would also evolve. Therefore, it was viewed as important for there to be governance rules guiding network decision-making that everyone understood. With the formal hierarchy in the background, different individuals would step into and out of network leadership nodes.

Governance Processes Required to Empower Network Decision Making

- Since the environment requires rapid decision making, information must flow instantly from the organizational boundary to all parts of the network
- The data must be integrated and decisions transparent across the network
- The network leaders must work together to build meaning and set boundaries on decision making
- It must be clear who synthesizes information and distributes it across the network and how
- People closest to the work help to define what changes are made and how rather than simply receiving instructions from others

A measure of "network efficiency" was suggested that captured the percentage of network connections that actually exist where needed divided by the number of connections that are supposed to exist. A low network efficiency would indicate that additional effort should be put into systems and relationships so that effective network decision making could take place.

In addition to network decision governance, it was felt that developing processes for continuous learning and creating a loop between measurement and adaptation would be important.

Rewards. The key shift in rewards philosophy required by this approach to joint optimization is that collaboration and inclusiveness should be incented over throughput or output. Other organizational values, such as customer service, might also receive special attention from a reward standpoint.

People: Curiosity, learning and flexibility become prized attributes of organizational members. In addition, developing greater precision, perhaps through data analytics, of putting together the membership of teams built for flexibility and high performance should be given attention. It was recognized that constant retraining in the face of change requires new "tooling" for talent development. The role of AI in enabling teams that have minimal viability to make important decisions was discussed.

Star Model™ adapted from J. Galbraith

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The STARLab Alliance is a non-profit learning consortium focused on creating next generation organization design and leadership models

The **Digital Organization Design STARLab** is a year-long learning experience that allows participants and subject matter experts to collectively explore and prototype practical and innovative responses to digitalization. STARLab Participants include 3-6 senior leaders from 10 companies, well-into the digital transition of their business models, who will partner with leadership and organization experts. The STARLab accelerates learning and creates organization design solutions that optimize the application of advanced technologies and human capital approaches to achieve agility and sustainable effectiveness.

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