

Open Project Management

from an “open” perspective

UNIT 5

Instructor: Dr. Bradly Alicea

<http://bradly-alicea.weebly.com>



Lecture 21

All content



Open Project Management

Welcome Back!



Automation I

Automation: a means to save human work by machines or automated processes.

Flyball governor: an early type of mechanical automation. Involves a feedback mechanism (crucial component of automated system).



Paradox of automation: the more efficient the automated system, the more critical human involvement becomes (even though they are taken out of the loop by automation).

Lisanne Bainbridge (1983).
Ironies of automation. *Automatica*, 19(6), 775–779.

Pros and Cons of Automation

PROS	CONS
Improve quality control	Intrusive, micromanaging
Replaces monotonous work	Takes humans out of the loop
Cost savings in long term	Initial cost of adoption
Sophisticated control	Hard to control at failure point
Perform superhuman tasks	Team integration not always seamless
Increased predictability	More automation, diminishing returns
Streamlines processes	Costly when automation goes awry

Wikipedia: Automation

<https://en.wikipedia.org/wiki/Automation>

Project Cybersyn (circa 1972)



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- operations room + simulations. Automation to manage a complex national economy.

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Operations room: based on the Gestalt principle – platform allows users to absorb information in a simple, comprehensible manner.

Stream-feed integration (from Unit 3)

Cognitive advantages for the learner.

- streams are based on what community is producing (discussing, writing) or interested in (papers, images) at any given time
- presented in the order they are posted, each medium is considered a stream.

In context, serendipitous themes begin to emerge: interesting posts that might form a coherent topical theme.

The screenshot displays a social media feed with a navigation bar at the top containing: HOME, PEOPLE/COLLABORATION, ENGAGEMENT, PUBLICATIONS, and OPEN SCIENCE.

The feed is divided into three main sections:

- Left Column:** A vertical stream of posts. The top post is from Daniela (@daniela.ciafi) with the text "Hi everyone!". Below it is a post from Brady Alicea (@brady) with the text "Catch up on the AI Debate (YouTube): <https://www.youtube.com/watch?v=YEC6LDCrAwI>".
- Middle Column:** A section titled "OREL Medium" containing three posts:
 - "Resources for and Reflections on AI Debate 2" by Brady Alicea, dated Dec 28, 2020.
 - "Ethics at NeurIPS 2020—A small collection of resources" by Jesse Parent, dated Dec 25, 2020.
 - "Recap of Orthogonal Lab Activities for 2020" by Brady Alicea, dated Dec 24, 2020.
- Right Column:** A section titled "Tweets by @Orthogonal_Lab" showing a tweet from Orthogonal Research and Education Lab retweeted by Florian Levelt (@f_levelt). The tweet text reads: "For my #i2k2020 tutorial I released a beta version of PoCA (Point Clouds Analyst), our evolution of the SR- and Coloc-Tesseler platforms. github.com/levelt/PoCA". Below the tweet is a colorful visualization of point clouds.

Below the feed is a YouTube channel page for "Orthogonal Research and Education Laboratory". The channel has 37 subscribers and 111 videos, with 3.3K views. The description states: "Videos of talks and video content sponsored by Orthogonal Research (<http://orthogonal-research.weebly.com>)."

The YouTube page features three video thumbnails:

- "Saturday Morning Recap" (12/26/2020): "Discussion and recap of AI Debate 2, in addition..." (4 Views, 0 Likes, 0 Comments).
- "Saturday Morning NeuroSim, 12-19" (12/19/2020): "Featuring Jesse Parent, Akshara, Gopi, and Brady Alicea. Follow-up on NeurIPS reflections, the..." (2 Views, 0 Likes, 0 Comments).
- "Brady Alicea's lecture to Philosopher's Web ..." (12/12/2020): "Lecture 'Observer-dependent Models'. Slides available on Figshare..." (0 Views, 0 Likes, 0 Comments).

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Simulations: Stafford Beer's Viable Systems Model. Five levels that are connected through feedback.

Project Cybersyn (circa 1972)

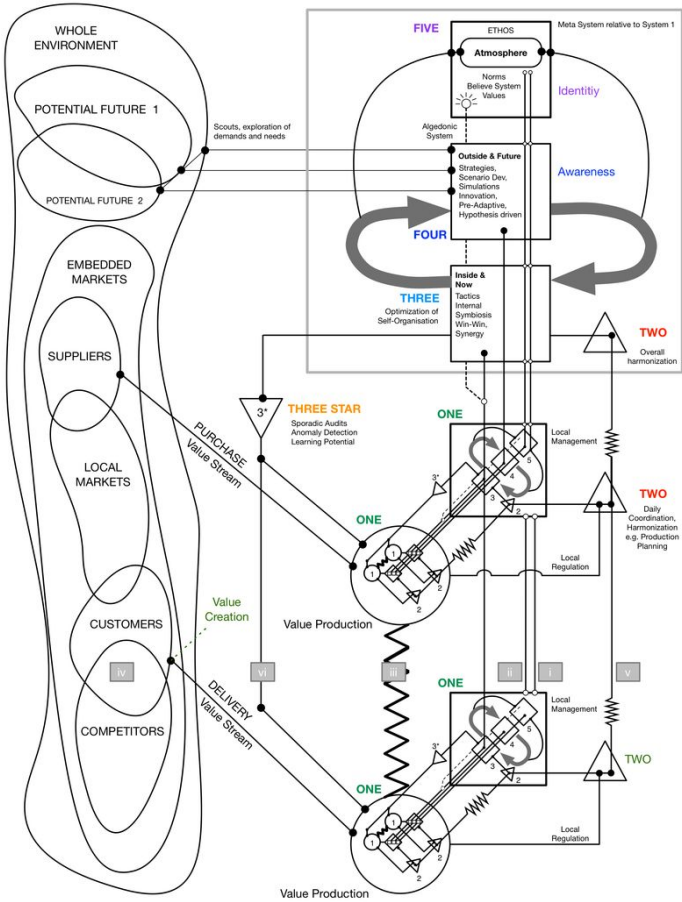
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Algedonic alerts (pain/pleasure): alarms and rewards that escalate through the levels of recursion when actual performance fails or exceeds capability.

The model is derived from the architecture of the brain and nervous system.

- systems 1-3 identified with the autonomic nervous system.
- system 4 embody cognition and conversation.
- system 5, the higher brain functions (introspection, decision making).



Viable System Model
Stafford Beer

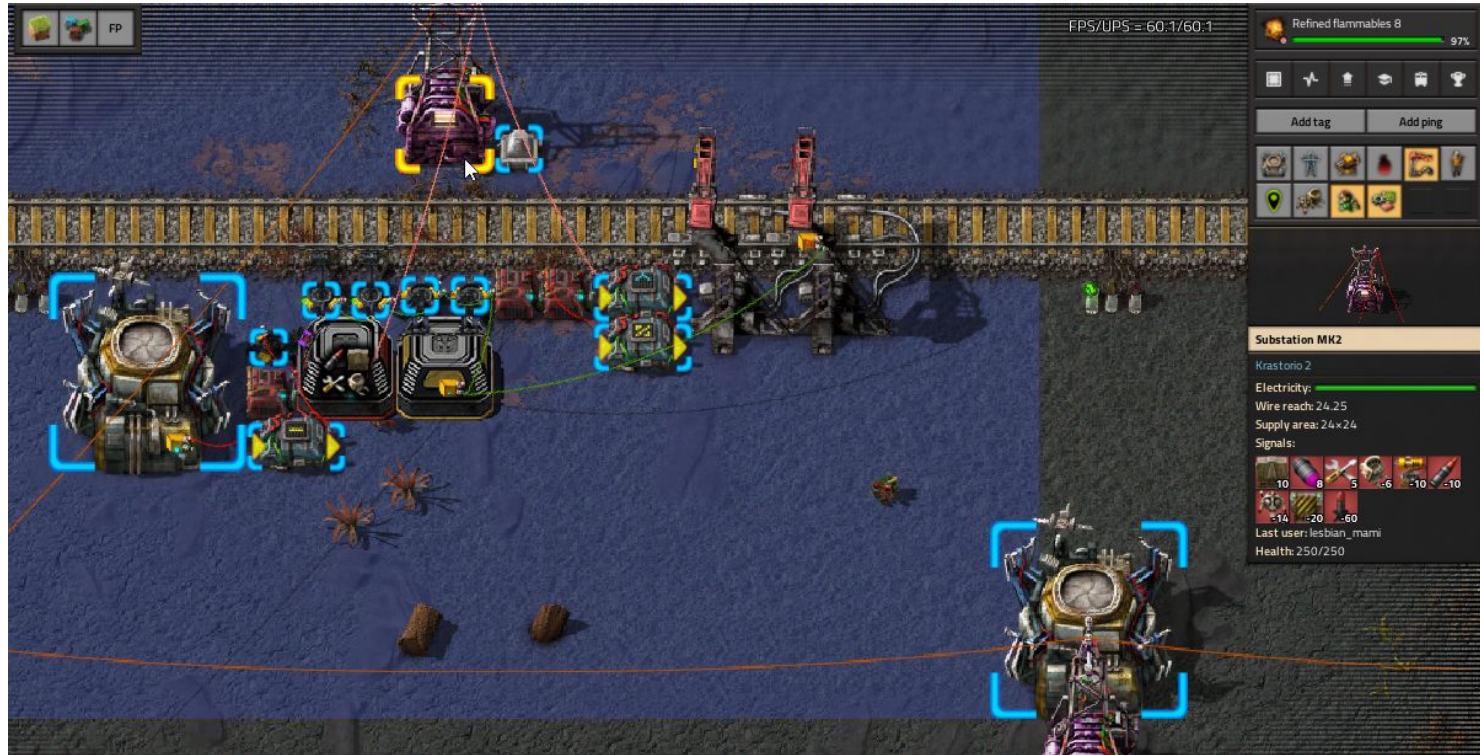
- Transducer
- Each ● represents an interface between each subsystem
- Channels:
- i Interventions & Rules
 - ii Resource Bargain
 - iii Operational Linkages
 - iv Overlapping Sub-Environments
 - v Anti-Oscillation, autonomous
 - vi Sporadic Audits

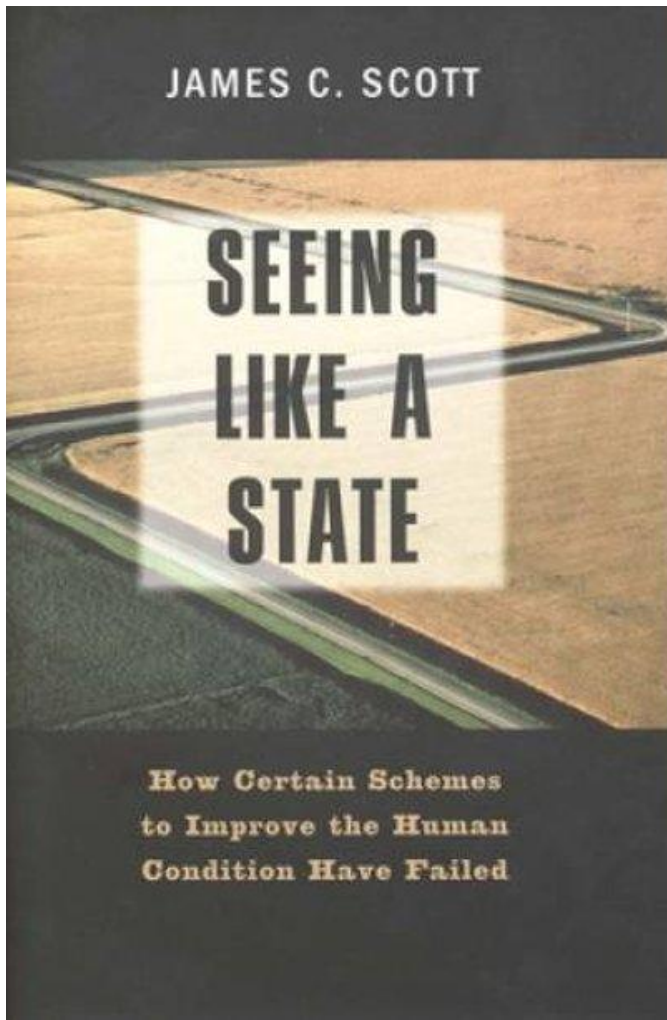
Viable Systems Model

Stafford Beer, *Brain of the Firm*, 1972

Project Cybersyn train network

Github repo: <https://github.com/mamoniot/project-cybersyn>





Seeing like a State

Large-scale planned projects often fail.

- too much complexity to account for (wicked problems).
- operating large sociotechnical systems based on “legibility” (standardization, optimization) is delusional.
- computers enable management of large systems, but comes at a cost (surveillance).

Automation for Project Management

Compiled by Bing + ChatGPT



Project management automation: use of technology and software to do tasks that humans would normally do.

- helps to complete tasks faster, with lower error rates, and with more transparency.
- improves communication and collaboration among team members and stakeholders.
- triggered by events or based on specific rules (if-then).

Examples of project management automation: sending emails, monitoring resources, and updating status reports.

How AI will transform project management

<https://hbr.org/2023/02/how-ai-will-transform-project-management>

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- low level of maturity of technologies available for project management.
- technology will soon improve project selection and prioritization, monitor progress, speed up reporting, and facilitate testing.

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- low level of maturity of technologies available for project management.
- technology will soon improve project selection and prioritization, monitor progress, speed up reporting, and facilitate testing.
- project managers/virtual project assistant synergies will find their roles more focused on coaching and stakeholder management than on administration and manual tasks.
- organizations that want to reap the benefits of project management technologies should begin today by gathering and cleaning project data.

All About Project Management Automation

<https://www.quickbase.com/blog/project-management-automation>

Automation can create and identify opportunities for efficiency gains

- tracking individual people and their contributions: can be intrusive (recorded contributions vs. productivity logs) but can also identify potential for productivity gains.
- optimization can maximize individuals with respect to their talents.

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- automation can act as an early warning monitor, alerting project managers when a workstream is going off timeline or over budget.
- predictive modeling and experimentation >> optimizing an existing operating model (larger efficiency gains).

All About Project Management Automation

Monitoring and control runs simultaneous to the execution stage.

- tracking and monitoring budgets, resource allocation, quality, and project performance (requires continuous information, adds much complexity).
- improve tasks associated with the monitoring/control phase: reporting, alerts, and benchmarking. Eliminates need for rote tasks, managers can focus on process.

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Upon project closure, there are still things left for project managers to do.

- assess the outcomes, workflows, and deliverables and consider how these things can be improved moving forward.
- helps gather these insights and give a clear overview of the success of the project. Closure are informed by quality data.

Can Project Management Be Automated?

<https://journyx.com/can-project-management-be-automated>

- 1) Offloading of routine tasks.
- 2) Scalability.
- 3) Improved risk assessment and mitigation capabilities.
- 4) Opportunities for efficiency gains.
- 5) More effective communication.

All About Project Management Automation

Increased productivity

Reduced busy work

Maintain quality assurance

Seamless integration

Streamlined communication

Other Article on Project Management Automation

The many benefits of project management automation

<https://www.teamwork.com/blog/project-management-automation/>

7 Benefits of Automated Project Management Software

<https://clickup.com/blog/automated-project-management/>

What is the role of RPA (Robotic Process Automation) in project management, and why does it matter?

<https://www.automationanywhere.com/solutions/bpo/pm-automation>