From Development Team to Development Stream: Innovating STS Theory and Practice for new "Adaptive Work Systems"

socio-technical systems roundtable inc.

Developed by STS•RT Discovery Team: Kevin Boyle, Doug Austrom, Don DeGuerre, Nina Gregg, Bob Laliberte, Helen Maupin, Craig McGee, Betsy Merck, Bernard Mohr, Joe Norton, Max Ogden, Carolyn Ordowich, Bert Painter, Pam Posey, Wim Springer, Stu Winby

Session Objectives

- Share the journey of the STS Roundtable's discovery process which illustrates how a virtual community of practitioners and academics are reaching out from our past of action research and collaborating in a self- managed way to discover STS today

- Engage with the community to consider how we might widen our Discovery Stream to co-create the development of theory and practice for global impact

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DISCOVERY PURPOSE

STS has matured and while it once was a technology that very effectively solved specific workplace problems of the 60's, 70's and 80's, work has become increasingly global, virtual, and dynamic, requiring us to reassess STS. We believe STS is relevant today and for the future based on the robustness of the theoretical framework first formulated in the 1960's. Our purpose is to ***discover*** a new conception of market need and the application technology to address this new need.

For STS to survive as a viable philosophy, concept, and contribution to the world of work, it must undergo a **discontinuous change.** Our collective role is to preserve the core values and principles of STS and discover through re-invention the new STS technologies that provide value. We are striving to produce:

- An evolving way of thinking about enabling "humane" organizations and model their new design features
- A set of principles for designing organizations to meet the challenges in the current market place
- A design process for applying the above principles in our practice as organization consultants

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STSRT DISCOVERY ROADMAP

2004	2005	2006	2007	2008	2009	2010	2010	2011	2012
Scottsdale RT	**Chicago RT & Montreal RT**	**Portland RT**	**Ottawa RT**	**Memphis RT**	**Chicago RT**	**MAY DT New Hampshire**	**SEPTEMBER RT Vancouver**	**SEPTEMBER RT New Orleans**	**SEPTEMBER RT CANTEBURY, UK**
Renewal of our Intellectual spirit of inquiry: **What does an STS approach to design look like in the 21st century?** Attended by two dozen STS stalwarts	**<u>STS Reinvention Began</u>** Jim Taylor & Stu Winby framed the STS S-Curve challenge in Chicago. The Reinvention Group [McGee, Ordowich, Painter, and Winby] formed coming out of Montreal.	The STS Community refined the ***Reinvention Framework*** & ***Reinvention Roadmap*** to address identified 21st century organizational obstacles The Reinvention Group was renamed the **Discovery Team** & expanded to three more members – Bateman, Merck & Posey	The STS Community applied the **Discovery *Framework*** to two case studies presented to demonstrate new design approaches. The Discovery Team grew with the addition of two more members – Austrom & Mohr	The STS Community applied the **Discovery *Framework*** to two case studies & deepened its understanding of future direction. The Discovery Team expanded with one more member – Maupin & carried out interim work – e.g. Bell Helicopter Case webinar	The STS Community began to iterate a future concept of an innovative and adaptive organization. The Discovery Team grew again with two more members – Laliberte & McDermott & carried out interim work – e.g. STS Webinars & planned for a Healthcare Solutions Lab	The Discovery Team met face-to-face for the 1st time as a team outside the annual meeting (a commitment of 3 days) to synthesize our learnings to date regarding the future of STS. Using a process developed by Stu Winby, the team created a prototype of a new design model [AEM] including a new iteration of values and design principles as well as a new design process. The Discovery Team added participants for this event – Don DeGuerre & Mary Winby	The STS Community added to the next horizon of STS thinking, affirming the complexity of new organizational forms. The Discovery Team expanded with Joe Norton	The objective is to have the STS Community participate in the R&D work of the Discovery Team during the session to further the development of new STS thinking.	The objective is to have ongoing collaboration of the STS Community in a Discovery Process of action research throughout the year.

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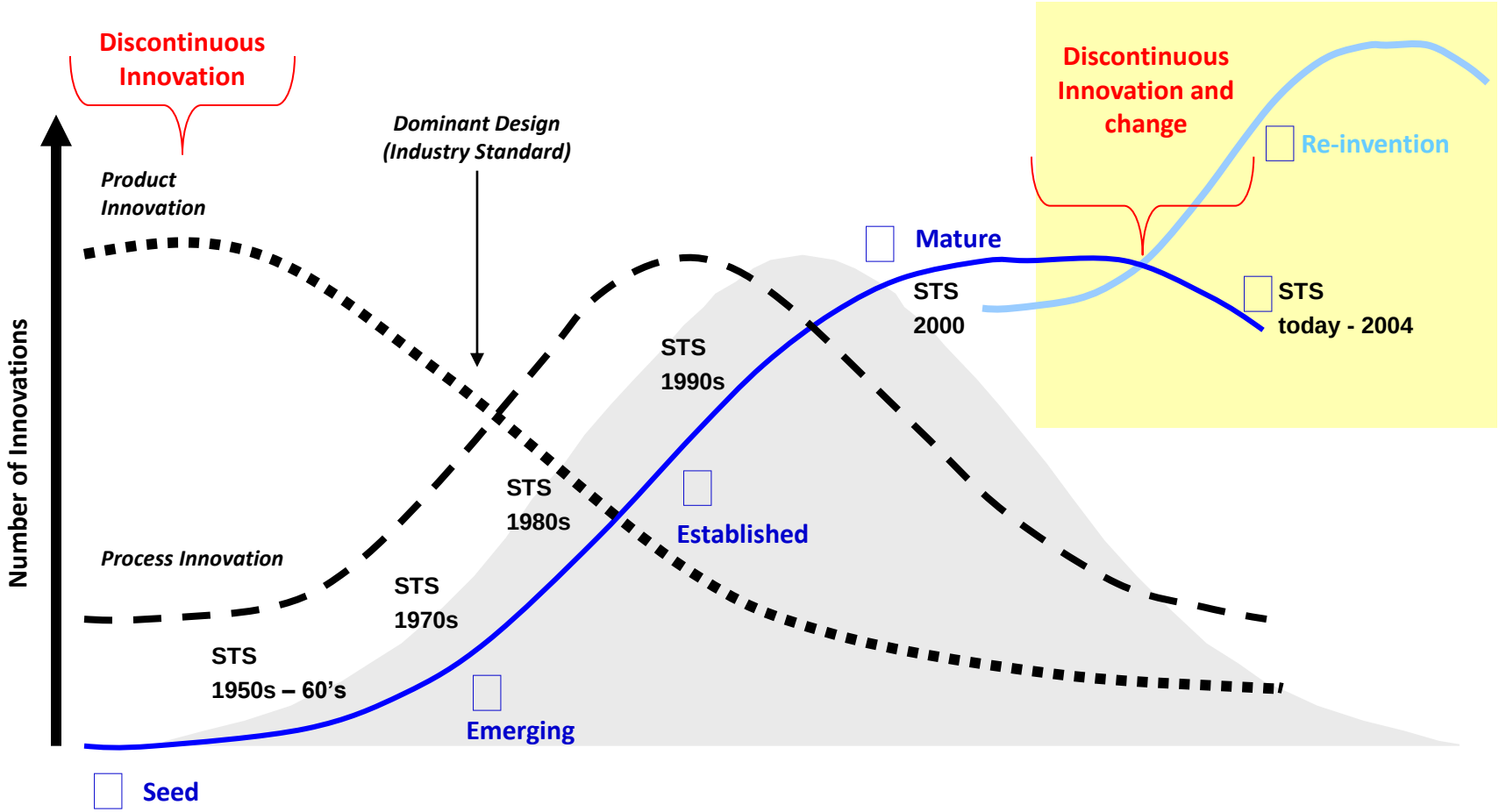
STS - Innovation across the Lifecycle

Presented in **Chicago, May 2005** by Stu Winby and Jim Taylor



The Chicago 2005 Roundtable dialogue confirmed the need for innovation and change to renew the practice of STS.

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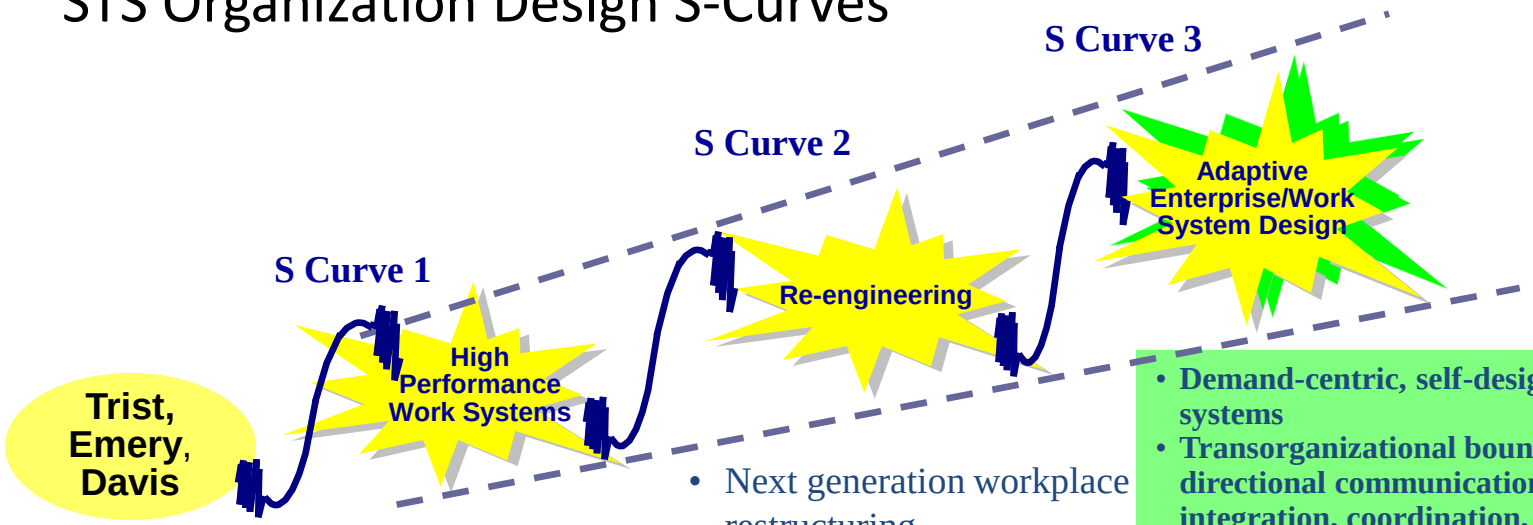
STS Organization Design S-Curves



- Socio-technical systems, new plant start-up, open systems experience
- Etc

- Next generation workplace restructuring
- Associated with new technology
- Large group intervention
- Participative Democracy

- **Demand-centric, self-designing work systems**
- **Transorganizational boundaries: multi-directional communication, trust, integration, coordination, linkages, cooperation, collaboration, cross-boundary levels, function and culture, interdependency, connectivity and improvisation**
- **Networks**
- **Alliances**

(developed with STSRT community 2005)

PAVA 1983 (adapted by R. Tenkasi for VOSS 2011)

STSv1.0

Routine work in a single organization – e.g., coal mines, factories, oil refineries

- Work groups with pooled identity
- Unitary conversion process
- Linear conversion sequence

STS v2.0

Non-routine knowledge work in single organizations – e.g., white collar office work, professional services firm, NPD and R&D

- Individual performers, specialized expertise
- Multiple, concurrent conversion processes
- Nonlinear conversion flow

STS v3.0

Virtual, non-routine work – e.g., R&D consortia, complex supply chains

- Individual performers and work groups distributed across multiple locations and/or organizations
- Multiple, concurrent independent and interdependent conversion processes
- Nonlinear conversion flows

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The Discovery Process

STS Values and Design Principles

Today's Organizational requirements

State-of-the-art management & organization science

R&D Lab

The New STS principles & design process for the adaptive enterprise

Future State

STS 3.0

A Six Stage Continuum of the R&D Process

R1	R2	D1	D2	D3	D4
PURE RESEARCH WORK (Open Project) • Don't know <u>what</u> we are looking for • Don't know <u>how</u> to carry out research	APPLIED RESEARCH WORK (Semi-open Project) • Don't know <u>what</u> i.e. end state or objective • Know <u>how</u> to carry out research	EXPLORATORY DEVELOPMENT WORK (Semi-closed Project) • Know <u>what</u> • Don't know <u>how</u> to achieve it	ADVANCED DEVELOPMENT WORK (Semi-closed Project) • Know <u>what</u> • Don't know <u>how in detail</u> to achieve it	START-UP (pilot plants, beta testing) DEVELOPMENT WORK (Closed Project) • Know <u>what</u> • Know <u>how</u> to achieve it *conceptually*	SCALE-UP (volume & costs DEVELOPMENT WORK (Closed Project) • Know <u>what</u> • Know how to achieve it operationally

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Team Descriptions

VOSS	• **Design Intent:** To discover the impact of virtuality on deliberations across the R & D continuum • **Approach:** Research - Case study methodology - 3 sites • **Current:** Analyzing results, continued research/survey, complete paper
Adaptive Enterprises	• **Design Intent:** Humane enterprise design in an increasingly turbulent and connected world • **Approach:** Co-creation, observation, action research • **Current:** Continued action research, cases, documentation
Adaptive Work Systems	• **Design Intent**: To develop the next generation STS Model • **Approach:** Action Research - Co-creation, case studies, deep dives • **Current:** Continued action research, cases, documentation
Voice of the Worker	• **Design Intent:** define a clear focus for the ongoing discussion in engaging meaningful voice for workers in organization and community design • **Approach:** Observation, case study, research & writing exchange, on-line dialogue & discussion, on the subject of direct and indirect worker voice • **Current:** Continued action research, cases, documentation
Writing Round Table	• **Design Intent**: Support writing that advances STS theory and practice; encourage dissemination of writings • **Approach:** Quarterly tele-conferences about individual and group writing projects. Participation welcome at every stage of writing • **Current:** Several member projects discussed; upcoming discussion of work-in-progress on expertise.

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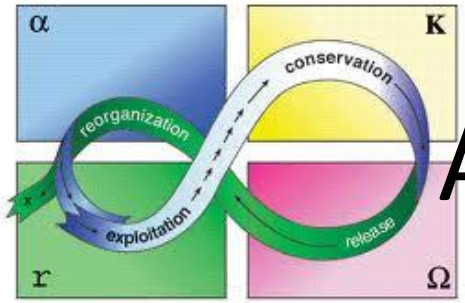

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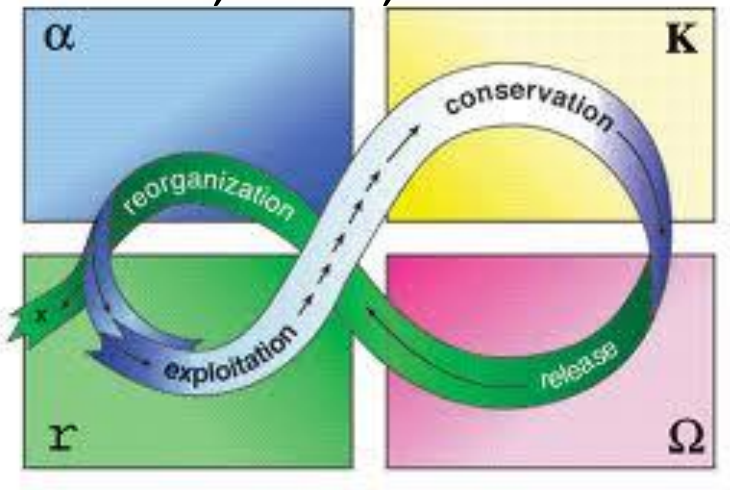

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Voice of the Worker

- **Design Intent:** discussions have been an attempt to define a clear focus for engaging meaningful voice for workers, illuminating essential nature of worker involvement in designing work and enterprises for sustainable economies
- **Approach:** On line discussion and sharing of team members writing and research on the subject of direct and indirect worker voice
- **Current:** Continued action research, cases, documentation

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STS Writing Roundtable

- **Purposes:** Support writing that advances STS theory and practice; encourage dissemination of writings
- **Approach/methodology:** Quarterly tele-conferences about current/proposed individual and group writing projects. Participation welcome at every stage of writing.
- **Current state:** Several member projects discussed; upcoming discussion of work-in-progress on expertise

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Exercise

Directions: At your table, please discuss and capture your discussion on a flip chart or two, put up on map and be ready to reengage with the full group in 30 minutes.

- What shared learning processes have you/others experienced with respect to the development of STS theory and practice?
- How can you imagine joining in this stream to broaden and strengthen- co-create our STS theory and practice globally for the 21st Century?