Potential Network Models

More optimal organizational, legal, and resource models will fit the vision and mission, goals and objectives, of the group and of the overall initiative.

Vision and Mission: Overview presented in the Story Map created at Arlington

Goals: Below, in general, from prior discussions – Order? Priorities?

Objectives: Operationalizing the goals into specifics – what exactly is it that is desired, to be achieved? Propose in Meeting 1, refine in Meeting 2.

Network for Sciences, Engineering, Arts and Design (NSEAD) Overall Goals

- Foster formation of a pilot network that serves as a junction for collaborative, cross-disciplinary work in Sciences, Engineering, Arts and Design
- Provide models for fiscal support of the network
- Assist in piloting an open and sustainable, regenerative model that enables future network growth

Provisional goals for the new network: Rank, add, and/or delete bullet entries.

_____ Connect a distributed community of stakeholders.

_____ Inform the community and others about the impact of the field on national STE[A]M educational initiatives.

_____ Promote the diversity of perspectives, approaches, and people in the creative innovation economy.

_____ Forge partnerships between international, federal, state, and local arts, research and industry institutions.

_____ Implement interdisciplinary hubs for constituents in the field to encourage dialogue.

_____ Build collaborative tools for maintaining online communities

_____ Other: ____________________________________________

_____ Other: ____________________________________________

From “Strategies for Arts +Science + Technology Research: Executive Report on a Joint Meeting of the National Science Foundation and the National Endowment for the Arts, D. Fox Harrell, Sneha Veeragoudar Harrell, workshop programming committee, with Pamela Jennings, Ph.D., Program Director, Computing & Information Systems & Engineering, Division of Information & Intelligent Systems.”
Criteria for Evaluation of Models

- Facilitates visionary (not just service) leadership
- Adapts to change for sustainability and long term growth
- Collaborative, cross- and inter-disciplinary work is fundamental
- Provides individual incentive for participation (leadership, members, new members, new leaders)
- Enables a blend of funding resources

Some tensions discovered through research of former organizations

- Visionary leadership vs. effective practical management of network
- Integration (e.g., across disciplines & organizations) vs. specialization
- ‘Not Invented Here’ syndrome, trust and communication issues
- Open source collaboration vs. proprietary idea / IP “ownership”
- Non-profit perspectives vs. corporate partners’ perspectives
  ✓ mismatch of research vs. industry project time frames
  ✓ mismatch of research vs. industry objectives
  ✓ alignment of incentives for researchers vs. corporate partners
  ✓ ability for network to ‘enforce’ or ‘broker’ collaborative projects
  ✓ R&D partnerships with self-interested corporate funders, rather than ‘benevolent’ ones, seem to work better
  ✓ the more a company puts forth effort & resources in the partnership the more successful for both parties
  ✓ there is need for mutual education in terms of goals, methods, and policies
Leadership: Top Down + Bottom Up
This model is leadership based. The first layer, a “blue ribbon panel” of experts, are selected for set terms by nomination and ballot according to established criteria. This panel would determine overall goals and objectives. The second layer, appointed by Layer 1, would manage research projects and attract participation from the third layer, in order to enable promising researchers to enter the first and second layers. Layer 3 would be comprised of self-selected volunteers by open invitation. Built into the structure are mechanisms for third-level interaction with the first and second layers: for example, input into project evaluation, mentorship, etc.


Constraints: Too general, ambiguous? Corporate and private funding potential less clear? Issues with intellectual capital? Number of projects more limited? Collaboration externally influenced across layers?
**Themes: Constituencies + Crossover**

This model is based on (self) organized constituencies and themes. Stakeholder groups would identify theme areas that reflect, for example, current cultural themes, pedagogical or research missions, or technology-specific initiatives. Theme groups would have relative autonomy, and would each develop their own goals and objectives. A ‘synergy’ group would be tasked to initiate and support crossover projects, as well as sources of ongoing collaboration. Periodic summits would enable knowledge, idea, and resource sharing and re-evaluate themes to ensure they are responsive to current trends.

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**Organizational & Resource Issues**: More distributed interest group and/or “center(s)” model. Board(s)? Need multiple constituency/theme or center boards or advisory boards. Resources? Lends itself to more of a consortia or ‘Media Lab’ organizational membership model. Grants? Growth trajectory? Incentives for collaboration? Objectives and key initiatives? Criteria for leadership? How are themes decided and how often re-evaluated? Interest group publications, workshops, conferences, (sponsored) events?

**Benefits**: Constituencies and themes can attract more and larger government, corporate, and private funders. Theme groups secure resources for specific projects. Autonomous decision making within theme areas. Autonomy provides an evolving, dynamic mix of foci. Themes’ affinity for self-organization.

**Constraints**: Weak at center. Less ability to establish a field. Less of an impact on policy change? Collaboration externally influenced by synergy group. Issues with intellectual capital.
Projects: People + Ideas
This model is project based. A set number of projects in a given term would be put to vote or otherwise organized by the relevant stakeholder groups according to established criteria and emerging opportunities. Project leaders would formulate objectives with a specific lifetime. Via workshops and online exchanges, leaders would disseminate needs to attract participation. A group would be selected to lead the periodic project decision-making process and network management. An online moderator would address inclusiveness and openness by providing knowledge dissemination and matchmaking invitations.

Organizational & Resource Issues: Decentralized project and contractual model. Leadership teams, but no formal board(s)? Individual projects managed by PI’s and project managers. Resources? Project-funded and lends itself to a more defined institutional technology transfer model, decentralized to the individuals and organizations with direct involvement. Grants? Growth trajectory? Incentives for collaboration? Objectives and key initiatives? Transition of leadership over time? Criteria for leadership? Project-specific publications, workshops, conferences, (sponsored) events?

Benefits: Attractive to private, corporate, and government funders who may have a direct interest in specific projects. PIs secure project resources. Project managers manage the projects. Flexible decision making. Less of an impact on policy change? Collaboration internally influenced within projects. Fewer issues with intellectual capital.

Constraints: Weak at center. Less of an ability to establish a field. Variability of project time frames. Different projects taking different directions, dissonance. Difficult to collaborate and cooperate across project areas. Lack of coherence in overall initiative?
Key Model Dimensions to Consider
Consider the benefits & disadvantages, rewards & costs of…

Centralization & Integration vs. Decentralization, Autonomy, Specialization
- Leadership Model
  More centralized & integrated
  Large, nebulous, ponderous?

- Theme/Constituency Model
  More autonomy, coherence
  But whither ‘synergy’?

- Project-oriented Model
  Most decentralized & specialized
  Disparate & disconnected?

Intellectual Capital and Intellectual Property
- Open
  Open and/or free to all, ‘crowdsourced’
  Who contributes, ‘owns’ & controls what?

- Semi-open
  ‘Members only’, membership has benefits – & costs
  Too exclusionary, too (institutional/corporate) ‘elitist’?

- Closed, proprietary
  Specific contributions & contracts, assignment & ownership
  Closed, constraining, whither the ‘public good’?

Resource Acquisition and Allocation: $ In & Out
- Membership
  e.g., good fit for Leadership Model?
  Individual membership
  Organizational/Institutional membership

- Grants & Sponsorship
  e.g., good fit for Theme/Constituency Model?
  More attractive to interested external sponsors

- Project Funding
  e.g., good fit for Project Model?
  Most attractive to specific external funders

Potential for Learning from Other Domains & Models?
- Translational Science & Medicine (including Engineering & Design)
  “An Architect Walks into a Lab”, viral gaming, etc.
  Catalyst, CTSA Consortium, NIH; CIMIT; etc.

- Others: From Movie Studios to iApps to Wikimedia…
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