

## Strategies for Success in Industry and the National Labs (and Federal Agencies)

Suzi Iacono, Digital Society and Technologies Program, National Science Foundation, US

CRA-W Career Mentoring Workshop, June 8, 2003  
San Diego, CA



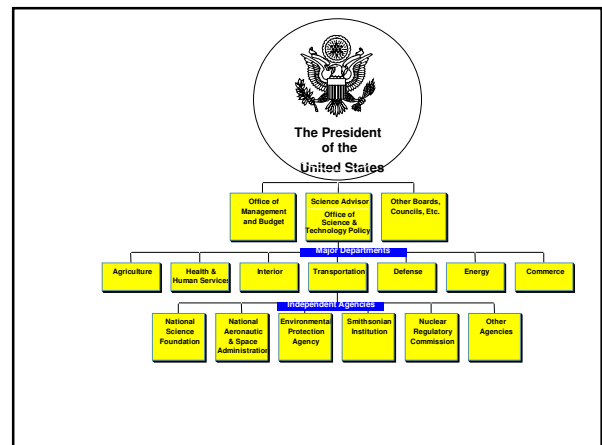
## Outline

- Set the context for the NSF (federal agency) environment
- Discuss several tensions that arise in this context
  - Bureaucracy vs. creative enterprise
  - Collaboration in a competitive environment
  - Stability amidst constant change, demands
- Respond to the questions posed for this panel
  - What are the characteristics of success?
    - Success? Sense of personal fulfillment
      - Personal, Organizational
    - Important milestones?
    - Important individuals?
- What does it take to succeed in this environment



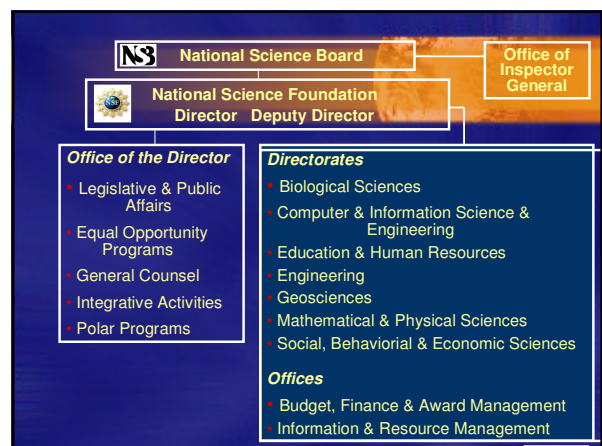
## The NSF Context

- It means working in the executive branch of the US government

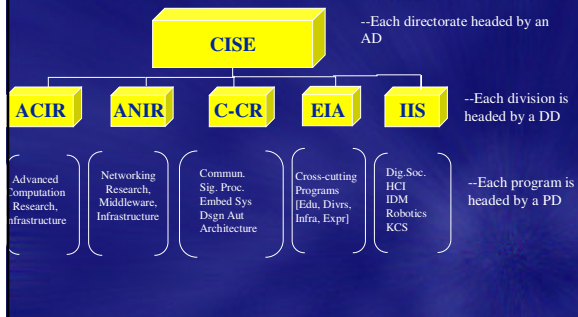


## The NSF Context

- It means working in the executive branch of the US government
  - Extant organizational structure and roles with little in terms of career ladder

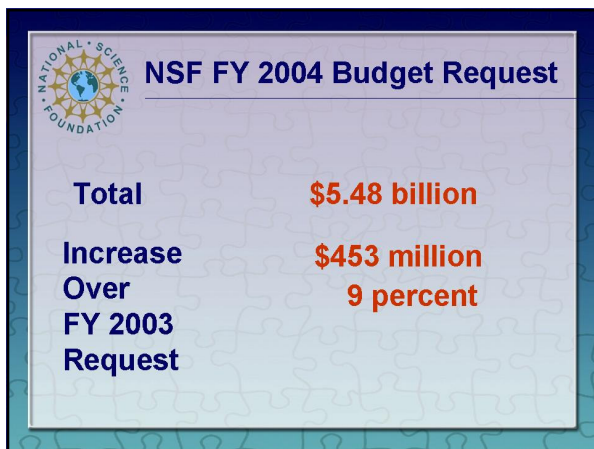


# Computer and Information Science and Engineering

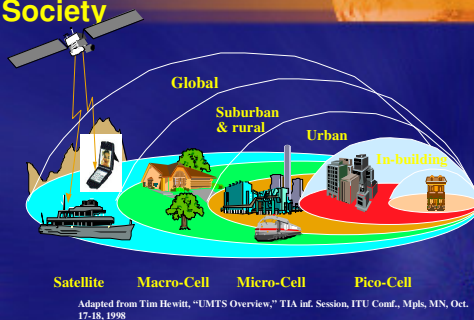


# The NSF Context

- It means working in the executive branch of the US government
- Extant organizational structure and roles
- Yearly budget process

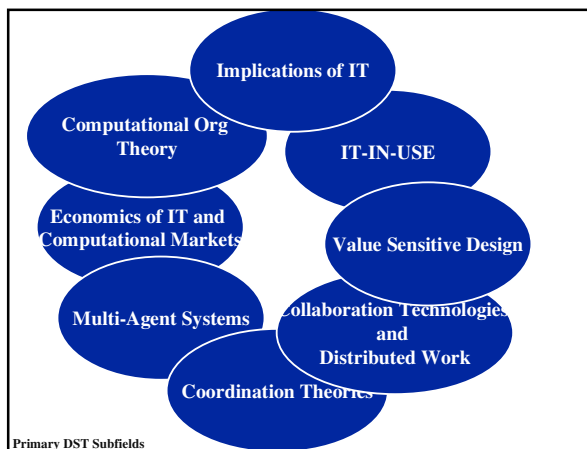


# Digital Society and Technologies: Universal Participation in a Digital Society



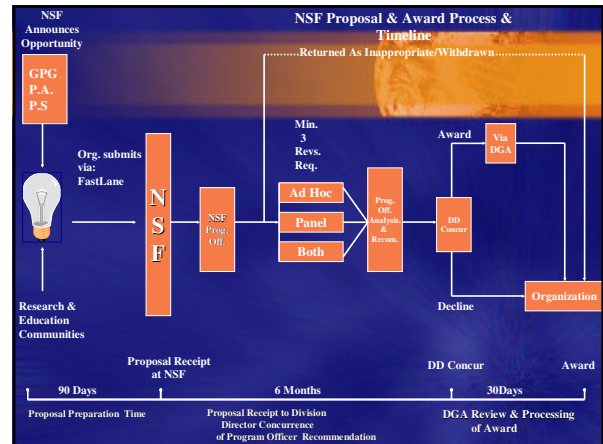
# History of Digital Society and Technologies Program at NSF

Year	Program	Directorate	Budget	Proposals	PD
1972	Comp. Act.	DO			Peter Lycos
1980	Spec. Projects	MPS			
1981	Spec. Proj.	MPS			Richards Adrion
1982	Spec. Proj.	MPS			Richards Adrion
1983	Spec. Proj.	MPS			Larry Oliver
1984	Spec. Proj.	MPS			Larry Oliver
1985	Spec. Proj.	MPS			Larry Oliver
1981-5	Impacts	BBS	\$1,750,000		Charles Brownstein
1986	Impacts	CISE	\$2,108,446		Larry Rosenberg
1987	Impacts	CISE	\$2,411,151		Larry Rosenberg
1988	ITO	CISE	\$2,100,000		Larry Rosenberg
1989	ITO	CISE			Larry Rosenberg
1990	ITO	CISE	\$3,150,000		Larry Rosenberg
1991	ITO	CISE	\$3,700,000		Larry Rosenberg
1992	ITO	CISE	\$4,339,327		Larry Rosenberg
1993	ITO	CISE	\$4,048,765		Larry Rosenberg
1994	ITO	CISE	\$4,690,000	27	Su-Shang Chen
1995	ITO	CISE	\$5,532,371	103	Su-Shang Chen
1996	ITO	CISE	\$5,354,575	38	Les Gasser
1997	ITO	CISE	\$5,825,189	58	Les Gasser
1998	CSS	CISE	\$5,400,000	79	Les Gasser
1999	CSS	CISE	\$6,400,000	81	Suzi Iacono
2000	CSS	CISE	\$6,200,000	67	Suzi Iacono
2001	DST	CISE	0,200,000	94	Suzi Iacono
2002	DST	CISE	0,700,000	93	Suzi Iacono



## The NSF Context

- It means working in the executive branch of the US government
  - Extant organizational structure and roles
  - Yearly budget process
  - Deadlines, productivity measures and rules related to the merit review process (proposal processing) and post-award processes (monitoring progress and approving changes)



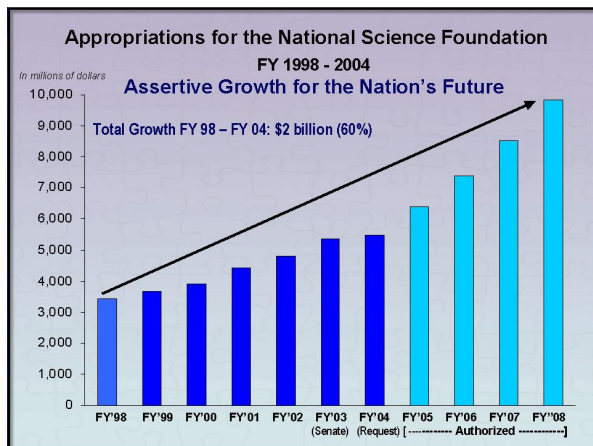
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  - Close to the political action – and potential to be in the news



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  - Growth in budget – doubling of NSF budget
  - Changes in content and structure – new programs, new initiatives

### NSF FY 2004 Budget Request

**Priority Areas**

	Millions of dollars		
	FY 2003 Request	FY 2004 Request	Percent Change
Biocomplexity in the Environment	\$79	\$100	26%
Information Technology Research	\$286	\$303	6%
Nanoscale S&E	\$221	\$249	13%
Mathematical Sciences	\$60	\$89	48%
Human and Social Dynamics	\$10	\$24	143%
Workforce for the 21 <sup>st</sup> Century	n/a	\$9	n/a

## Three Tensions that Arise in the NSF Context

- Bureaucracy vs. creative enterprise?
- Collaboration in a competitive environment
- Stability amidst constant change, demands



## Bureaucracy vs. Creative Enterprise

- Conditions of the environment present choices:
  - The rules, the demands could lead one to become a highly paid clerical worker or one can try to be a leader with a vision --using new opportunities, new money, building coalitions, etc. to do something
  - Even if one does chose to be a leader, it is necessary to work within the bureaucratic constraints while building, nurturing new enterprises

## Collaboration in a Competitive Environment

- Collaborative environment:
  - Always part of a group – division, program team, committees, task forces
  - Want to collaborate across boundaries → co-review, co-fund
- Competitive environment:
  - For funding
  - For input into new solicitations
  - For resources, awards, bonuses, recognition
- The Tension: Building social relationships with those that you compete with for program budget, initiative budgets

## Stability amidst Constant Demands, Change

- **Stability:**
  - Stable processes are required to achieve performance
  - There are multiple workflows, one's part must be done
- **Change, Demands on Time:**
  - New money to spend, new solicitations
  - New management
  - New staff
- **Tension: Handling stress, deadlines, productivity and change demands while also being productive**

## Success Characteristics

- **Personal:**
  - **Passion**
    - Have a vision of where you want to go, what you want to do, develop your talking points, bring them up incessantly, never let anyone make oblique negative comments in discussion
    - Take responsibility for your vision, be a leader, do the work
    - Know how to prioritize, be efficient with time
    - Know the rules, know what you can and can't do
    - Keep emotion out of the relationships; care and not care about one's program; maintain neutrality; be able to give and take; show respect
- **Organizational:**
  - **Energy to disseminate one's passion**
    - Internal -- build social networks, build social capital especially across boundaries -- across programs, divisions, directorates
    - External -- build social networks with other agencies with similar R&D, OSTP, OMB, NRC, and with community of grantees (committees, workshops)

## Important Milestones

- Participated in initiatives outside regular program
- Early opportunity to work with PITAC and give editing recommendations
- Asked to give talks internally
- Chaired an interagency committee, had to report to a larger committee
- Chaired a "theme" in ITR
- More resources for travel available
- Traveled to Europe to meet EC counterparts, held workshops in Europe
- Asked to give talks externally
  
- More like building a support structure than an individual journey
- More like becoming a member of various communities

## Important People

- Academic mentors who supported, protected and pushed
- Research colleagues -- peers with whom I have remained friends over the years, although all our roles have changed
- Bosses -- let me do my thing, said things like "act and then ask;" used humor to talk about bureaucracy "Friday afternoon fire drills"; "don't put much time into writing that document-- nobody will read it"
- My current colleagues -- take the best and model that behavior
- My grantees -- they are doing the science and making the important advances; nurturing them is key

## Recommendations

- Be aware of the tensions and manage them
- Have a vision and persevere
- Build strong social relationships
- Build a support structure

## Send email if you have questions!

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