Observations by the Dean, Associate Dean, SIS Council Chair, and Program Chairs (BSIS, GIST, TeleNet, LIS)

1. **Changes in the School / Program over the past 5 years driven by or related to assessments.**
   a. Restructuring of SIS governance to reduce barriers to interdisciplinary collaboration and provide a foundation for School-wide perspectives consistent with the iSchool vision (this was a long-standing recommendation of Boards of Visitors in prior years)
   b. Introducing and refining specializations into each degree program to provide improved clarity to students and to build on faculty strengths
   c. Substantially transforming the Telecommunications and Networking program in response to an industry assessment and BOV recommendations
   d. Introducing new assessment processes in response to increased attentiveness to accountability at all levels (learning outcomes assessment, peer review of teaching, accreditation self studies, …)
   e. Restructuring administrative support (including student services, faculty services, IT support, web support, external relations, and institutional advancement), notably including the recent hiring of a Chief of Staff / Director of Administration

2. **Exogenous trends that have impacted or influenced the changes that have been made.**
   a. The growing role of digital technologies in society has positioned a number of schools that incorporate both technical and humanistic perspectives in their curriculum and research to position themselves to make unique contributions to the education of a new generation of information professionals. This has been marked by the founding of the iSchools Consortium and its governing body, the iCaucus (Pitt SIS was among the leaders in this process); the iCaucus has grown from an initial 5 organizing members to 27, with international representation from Canada, Europe, and Asia
   b. The dot-com bubble had an adverse affect on enrollment in the IS and TeleNet programs, with enrollment ballooning in the late 90's and plummeting between 2002 and 2005. This trend was felt nationwide in related programs, and had direct impacts on all SIS programs (including the introduction of the FastTrack MLIS program to expand the base of enrollment alternatives, offer educational alternatives to those unable to move to Pittsburgh, and compensate for tuition losses in other programs).

c. A generational change in students, characterized by pervasive use of consumer electronics and online social media; greater expectations for high grades coupled with less reported time spent studying; a greater proportion of Masters students lacking work experience; and an increase in diagnosed learning disabilities that impact classroom experiences.

d. Growing assessment and accountability requirements at the university, state, federal, and professional levels take the form of unfunded mandates and consume increasing levels of administrative and academic resources.

e. Federal research funding is increasingly being directed to larger scale, multidisciplinary projects that require collaborative teams of researchers in multiple departments, schools, and universities. The competitive pressure for these awards has also increased, as reflected in NSF award rates that frequently dip below 10%.

3. **Dominant challenges and risks to SIS and its programs that are informed or driven by current assessments.**

a. While the undergraduate, IS, and TeleNet enrollments have been on a gradual rebound since 2006, the compensations made in the LIS program (growing the on campus enrollment and adding the FastTrack program to increase tuition revenue) has produced unacceptably high teaching loads, particularly among junior faculty who are trying to build their research portfolio. We are at some risk of losing junior faculty with strong aspirations for research, with the commensurate impact on the School's reputation.

b. SIS has made some progress in growing its interdisciplinary, collaborative research, as reflected in continuing growth in both its research funding and the number of faculty participating in externally funded work, but this continues to be a significant "work in progress." The marginal results achieved through Research Interest Groups (RIGs) several years ago gave way to the current strategy of bringing in a post-doc to support interdisciplinary research.

c. Given the externally imposed emphasis on assessment, this continues to be an ongoing and substantial challenge that faculty and staff wrestle with.

d. While the University has refurbished many of our classrooms up to standards for conventional instruction, some courses require more specialized facilities to support instruction in areas of software engineering (e.g., pair programming), web applications development (e.g., networked servers), and online instruction (e.g., video and interactive course delivery). Financial and space constraints have resulted in many compromises that result in sub-optimal situations for too many courses.

e. The culture of the School is evolving gradually, beginning to explore, to experiment with, and, hopefully, to ultimately embrace a more holistic

understanding of itself as an iSchool, but there remain legacy issues, interests, and concerns for what is lost in contrast to what is gained. In addition, the pressure of adding and adapting course materials that respond to contemporary needs of the information professions introduces course compression issues that may suggest an expansion of Masters' programs beyond the current 36 hour requirement.

4. **Notable opportunities that have become apparent as a result of current assessments.**
    a. Research and instructional opportunities are emerging with groups on campus with whom we have had little interactions in the past. The recent collaborations with Patrick Manning (History Department) on the World-Historical Dataverse project and Don Burke (Public Health) on epidemiological modeling provide two recent examples.
    b. The School's PhD programs provide an opportunity to distinguish and define the iSchool's emergent strengths in areas that span the traditional SIS disciplines, and to educate a new generation of scholars who "get" the iSchool thing. Doctoral seminar series in theme areas (e.g., "Working Memory") are beginning this academic year, and interest has been expressed in a new theme of "Values in Design."
    c. Establishment of an iSchool "identity" requires an intellectually robust and coherent understanding and elucidation of the fundamental questions surrounding *information* and its use. Such questions (by definition) extend beyond those that comprise subdiscipline traditions. We have received a grant from the National Science Foundation to bring 30 interdisciplinary scholars together to explore such questions in a workshop entitled "New Configurations of the Virtual and the Real" to be held in March 2011.
    d. The information professions (and the university faculty that educate them) are notorious for their lack of gender and ethic diversity. Believing that a diverse faculty is a fundamental requirement to attract students from diverse backgrounds to professional and academic positions, with funding from the Andrew W. Mellon Foundation we are launching the iSchool Inclusion Institute (i3) in the summer of 2010. The Institute will invite 20 rising undergraduate juniors to Pitt for a 4-week residential program designed to introduce them to academic careers in iSchools. During their junior year, they will complete a team-based project and return to Pitt for a 2-year residential program during their junior/senior summer to present their work and develop their plans for graduate study.
    e. The volatility of enrollment during the past decade has led SIS to conduct a number of recruiting experiments involving financial aid and tuition scholarships. While these have been conducted in a largely ad hoc fashion, they provided useful empirical evidence, providing an opportunity now to develop a more analytic approach to managing our

financial aid resources with the objective of optimizing the faculty teaching/research workload balance and maximizing the discretionary tuition revenue that can be invested in the School's infrastructure and programs.

5. **Potential scenarios that suggest alternative futures for the School and its programs, that offer insight into the School's 5-year prognosis and contribute to its vision.** (Note, the ARL workshop reported in the Chronicle of Higher Education, 10/19/2010, influenced the following. The scenario names for a-d are from that workshop.)

   a. *Research Entrepreneurs* – This scenario anticipates a future in which "creativity matters more than institutional or disciplinary affiliations" and faculty draw larger portions of their support from research sponsors (federal, corporate, foundation, philanthropic). This scenario anticipates widespread understanding and response to reports such as the recent *Rising Above the Gathering Storm, Revisited: Rapidly Approaching Category 5*. Research funding is plentiful and national research priorities are well articulated. The School in this scenario strives to provide superior infrastructure and support services to attract the best faculty. In this scenario, faculty may become more mobile and tenure issues may be of less interest to some. The School's educational programs (particularly at the PhD level) will prepare graduates for such entrepreneurial, mobile careers by offering more opportunities for visiting researcher opportunities, including international venues. The curriculum emphasizes theory, principles, design, and creativity.

   b. *Reuse and Recycle* – This scenario is the doom and gloom one, where "disinvestment in the research enterprise has cut across society." The research that is conducted depends on reusing existing resources and on mass marketed technology infrastructure. It consists of relatively small-scale projects that are cobbled together for near term advances, and is distinguished by a "crowd/cloud" approach that produces information that is "ubiquitous but low value." In this scenario, the School's professional Master's programs may dominate, with a concomitant need to strengthen linkages with potential employers and to assure that curricula are directly aligned with the espoused needs of those employers. Education places a priority on development of assessable knowledge and demonstrable skills.

   c. *Disciplines in Charge* – This scenario may align most directly with the current iSchool vision. It anticipates a future in which "computational approaches to data analysis" drive research in virtually all disciplines in the humanities and sciences. Scholars "align themselves around data stores and computational capacity that addresses large-scale research questions". Information professionals are routinely part of interdisciplinary teams and contribute to the work of the team as peers to the other disciplinary scientists, engineers, and scholars. Students from

essentially any discipline come to the iSchool to augment their disciplinary expertise with an information degree or certification. The number of service courses offered by the iSchool dramatically increases (creating pressure on teaching resources and remuneration for such courses), and the iSchool student body includes an exceptionally diverse cross-sectional representation of the disciplines. The curriculum fosters a coherent view of information as a common foundation to all scholarly endeavors and demonstrates how this foundation is elaborated among different disciplines.

d. *Global Followers* – This scenario might, alternatively, be called the *China Syndrome*. While the overall research climate resembles the current one, countries outside the US (primarily in the Middle East and Asia) assume an increasing role in supporting the research enterprise. We already have some evidence that China is investing heavily in its universities, sending its students and faculty to universities in the US and becoming increasingly proactive in establishing research partnerships involving faculty at US universities (including Pitt). In the long term, one could anticipate US universities losing their current lead as venues of choice for the best faculty and students, and a shift in the cultural norms that govern research today (e.g., with respect to intellectual property, human subject research, and privacy). In this scenario, the curriculum attends to the employment needs and priorities of globe-spanning collaborations centered on large-scale projects, and on the education of local and regional practitioners.

e. *The Corporate University* – In this scenario, the university gradually but inexorably adopts success metrics and accountability practices of the corporate sector, where to an increasingly fine granularity, everything is measured and evaluated for ROI. In such a system, it is inevitable that some disciplines prosper and others falter. In the iSchool, where virtually any discipline can be represented among the faculty, it potentially takes on a more personal aspect that could either endanger individual faculty from disciplines less "profitable" or, alternatively, provide them sanctuary. The curriculum becomes increasingly dependent on the expressed needs of employers, who provide not only the requirements, but also influence the success criteria. Online, on-demand educational modules and courses may likely provide a revenue stream of increasing significance in this scenario.

6. **How does SIS assess itself with respect to the iSchool vision and SIS mission (below)?**

   a. The iSchool vision embraces a view of *information* as a discipline that attracts scholars from a broad range of other disciplines to work together in understanding its nature and use. It anticipates an intense curiosity among iSchool scholars in the different perspectives brought by disciplines other than their own, and efforts to meld these differing

perspectives in to a new whole. It envisions a culture that nurtures such explorations. SIS is evolving from a long history of excellence in more narrow disciplinary endeavors, including all aspects of librarianship (children's, academic, medical, corporate, …), archives & records management, information systems design and analysis, information retrieval, telecommunications, networking, and cognitive science (this is a representative but not comprehensive list). Building bridges among faculty of such diversity remains a challenge, but one that interests a growing number of SIS faculty (and especially the more junior faculty). We actively experiment with (and assess) initiatives designed to accelerate interdisciplinary, collaborative teaching and research, and have learned from both our successes and failures. We do not yet claim to have achieved our vision as an iSchool but have made noteworthy progress over the past five years, reflected through a number of measures, most notably the faculty and staff hires we have made, each of which is designed to advance our stature as an iSchool.

b. The SIS mission has been central to all of our planning efforts for many years. It is a mission that we believe is conducted effectively and efficiently, and one in which we strive to exercise continual improvement. The challenges facing the School relate to interpreting this mission and adapting to changing conditions and circumstances.

7. **What steps can SIS (and the BOV) take to advance its effectiveness and stature as an information school?**
   a. Assure full funding for all full time PhD students.
   b. Improve and expand the physical facilities supporting faculty and student research.
   c. Reduce online and on-campus teaching workloads for research-active junior faculty.
   d. Define, develop, clarify, and enunciate the set of existing and emerging signature strengths of the School that are expressed in research, colloquia, and curricula.
   e. Define a series of coherent threads, tracks, or specializations that extend from the undergraduate program, through the Master's programs, and into the PhD programs.

VISION & MISSION

The following is the *vision statement* of the iCaucus, the management forum for the iSchools Consortium:

"The iSchool Caucus seeks to maximize the visibility and influence of its member

schools, and their interdisciplinary approaches to harnessing the power of information and technology, and maximizing the potential of humans. We envision a future in which the iSchool Movement has spread around the world, and the information field is widely recognized for creating innovative systems and designing information solutions that benefit individuals, organizations, and society. iSchool graduates will fill the personnel and leadership needs of organizations of all types and sizes; and our areas of research and inquiry will attract strong support and have profound impacts on society and on the formulation of policy from local to international levels."

The following is the *mission statement* of Pitt's School of Information Sciences:

"The Mission of the School of Information Sciences is to support and advance the broader education, research, and service mission of the University by educating students, furthering knowledge, and contributing our expertise to advance humankind's progress through information.
This mission is achieved through specific actions:
- Providing a high-quality undergraduate program in Information Science
- Offering superior graduate programs in Library and Information Science, Information Science, and Telecommunications
- Engaging in research and scholarly activities that advance learning through the extension of the frontiers of knowledge and creative endeavor
- Cooperating with industry and government to transfer knowledge
- Extending our expertise to local communities and public agencies to contribute to social, intellectual, and economic development in Pennsylvania, the nation, and the world."