

2040

EDUCATIONAL VISIONING
STATEMENT

July 11, 1994



THE 2040 EDUCATIONAL VISIONING COMMITTEE

Committee Chair

Dr. Nancy Wilgenbusch, President
Marylhurst College

Committee Members

Dr. Larry Large, Vice Chancellor for Public Affairs
Oregon State System of Higher Education

Dr. Steven S. Koblik, President
Reed College

Dr. Peter Kohler, President
Oregon Health Sciences University

Dr. Judith Ramaley, President
Portland State University

Dr. Dwight A. Sangrey, President
Oregon Graduate Institute

Dr. Edward F. Stevens, President
George Fox College

HIGHER EDUCATION: A CATALYST FOR THE 2040 VISION

A vision is a purposeful dream. It's a dream with substance, with dimension, and with intentionality. A vision for our community in 2040 has to be compelling; it has to pull us to passionate and resolute action. And it must reveal our hearts as confidently as it demonstrates our best thinking.

Vision-making is serious business. Out of it emanates the strands of intent around which policy and strategy are subsequently wrapped. This documented vision for the Metro community necessarily includes reflections about higher education because learning and knowledge support all meaningful action that will determine our future and the future of our children.

This region is a special place in the geography and sociology of America. The extraordinary quality of life experienced today is possible because of the strategies and actions of people who had pursued their earlier dreams. Education, as essential as it was to them, will be increasingly critical to our community in the future. Education supports all elements of the community. As Aristotle has so eloquently pointed out, the fate of empires depends on the education of its people.

Higher education, as a critical segment in an overall process of lifelong learning, is a catalyst in the quality of life equation. Higher education prepares citizens and professionals who are needed to direct and support the development of the region. The degree to which we succeed in providing educational opportunities for succeeding generations will determine the extent to which this community retains its quality.

Higher education historically has been a full partner in the realization of dreams. As early as our new found independence as a sovereign country, one patriot leader predicted that “colleges would be nurseries of wise and good men to adapt our modes of teaching to the peculiar form of government” (American Education: The National Experience 1783-1876, pp. 116). Then colleges and universities had as their primary goal the training of new leadership necessary for a fledging country. Later, in the nineteenth century, students of the New World came to college from increasingly diverse backgrounds to learn increasingly diverse curricula. The classical curricula expanded to embrace the emergence of the new science created by economic expansion, culminating in the historical Land Grant Act of 1862, which acknowledged the rightful place of practical arts in the university experience. The twentieth century brought unprecedented change to American higher education. As new cultures flooded the country, brought on the backs of immigrants, higher education responded again by the further opening of its embrace. Foreign languages, science, mathematics and sociological studies joined the classics as important parts of the collegiate palette. Then, after World War II, the G.I. Bill forever and radically altered the face of American higher education as millions of non-traditional learners and first generation college students marched onto campuses. Once again, curricula and methodologies were altered to accommodate the emerging needs.

Since the G.I. Bill, higher education has continued to respond to the challenges faced by our community. By providing a variety of institutional types with differing missions, including technical education at the community colleges and research and graduate education at the other end of the educa-

tional continuum, higher education has been a dedicated partner in developing the quality of life we cherish in our community.

As important as education has been in the past, education will matter even more in the future. Crucial changes will occur in our community by the year 2040. These include:

1. Portland will have greater ties to the global economy. In fact, Portland's economy will be increasingly linked through transnational companies to economic expansion in Asia and the Pacific rim.
2. Portland's population will be larger, older, and more diverse. Like the rest of the United States, Portland will become more ethnically and racially diverse, and the population will age as baby boomers enter their elder years by the year 2040. Portland will continue to experience rapid population growth.
3. High value jobs will require higher levels of education. More high paying, high value jobs will require at least some college education; in general, retaining good jobs will mean continuing education, ongoing training, or recertification.
4. University research in key areas will help create jobs. Research in key areas like new energy sources, pollution-free industries, telecommunications, new materials development, bioengineering, medicine, and computers will be at the heart of creating the jobs Portland's citizens want.
5. Portland's extraordinary assets will be preserved by a caring citizenry. Portland's tangible assets, like its awesome physical beauty, as well as its intangible assets, like the involvement of its citizens, will keep the region a desirable place to live and to work.

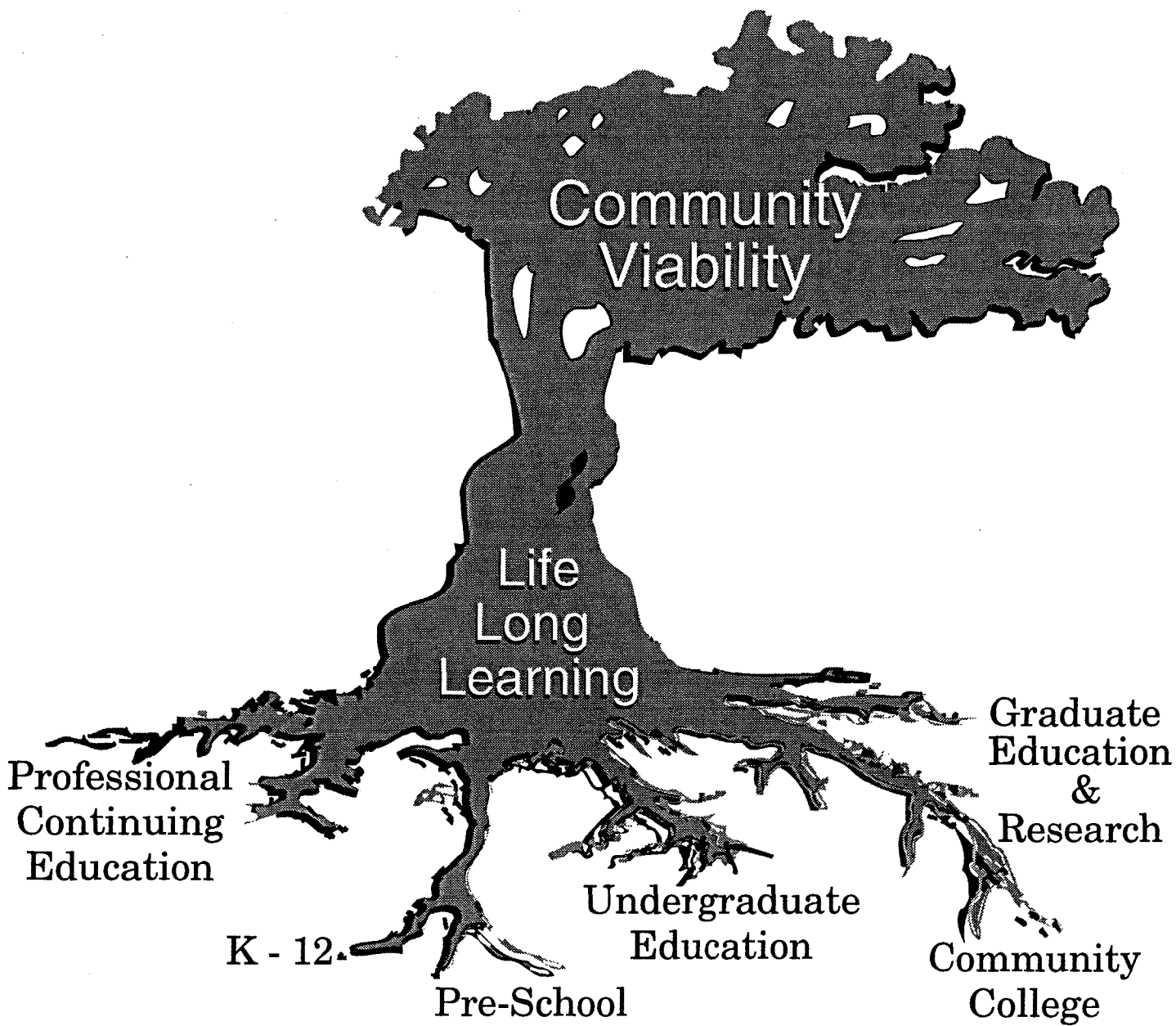
6. Since 1980 the distance between the “haves” and “have nots” in America has increased dramatically; this trend will have to be reversed if social and economic vigor is to be maintained.
7. The political and economic conditions of the next century will require a greater number of intellectually agile citizens to take roles in an ever changing work force and in the political and social institutions of the country.

As the changes which will occur in the region become increasingly clear, the ways in which higher education needs to restructure also become apparent.

1. ***Higher education must assume new responsibilities and functions to create an integrated system of lifelong educational services from pre-kindergarten through continuing education.***

Educators at all levels have a unique opportunity to use their institutions and their human resources to create a network of affordable and accessible learning opportunities for citizens of all ages. Building on current joint ventures, Portland’s educational community can continue to create the most effective learning alliance in the nation. This system, built on the special strengths of each school, is the best way for Portland’s citizens to get the education they need and want, at a cost they can afford.

When we achieve this aspect of our vision, we will have created a new educational asset which will make a lasting contribution to the quality of life in Portland.



2. *In the next forty years, Portland can become an intellectual port and global city where information is a product created here and exported around the world. For us to realize this daring vision ...*

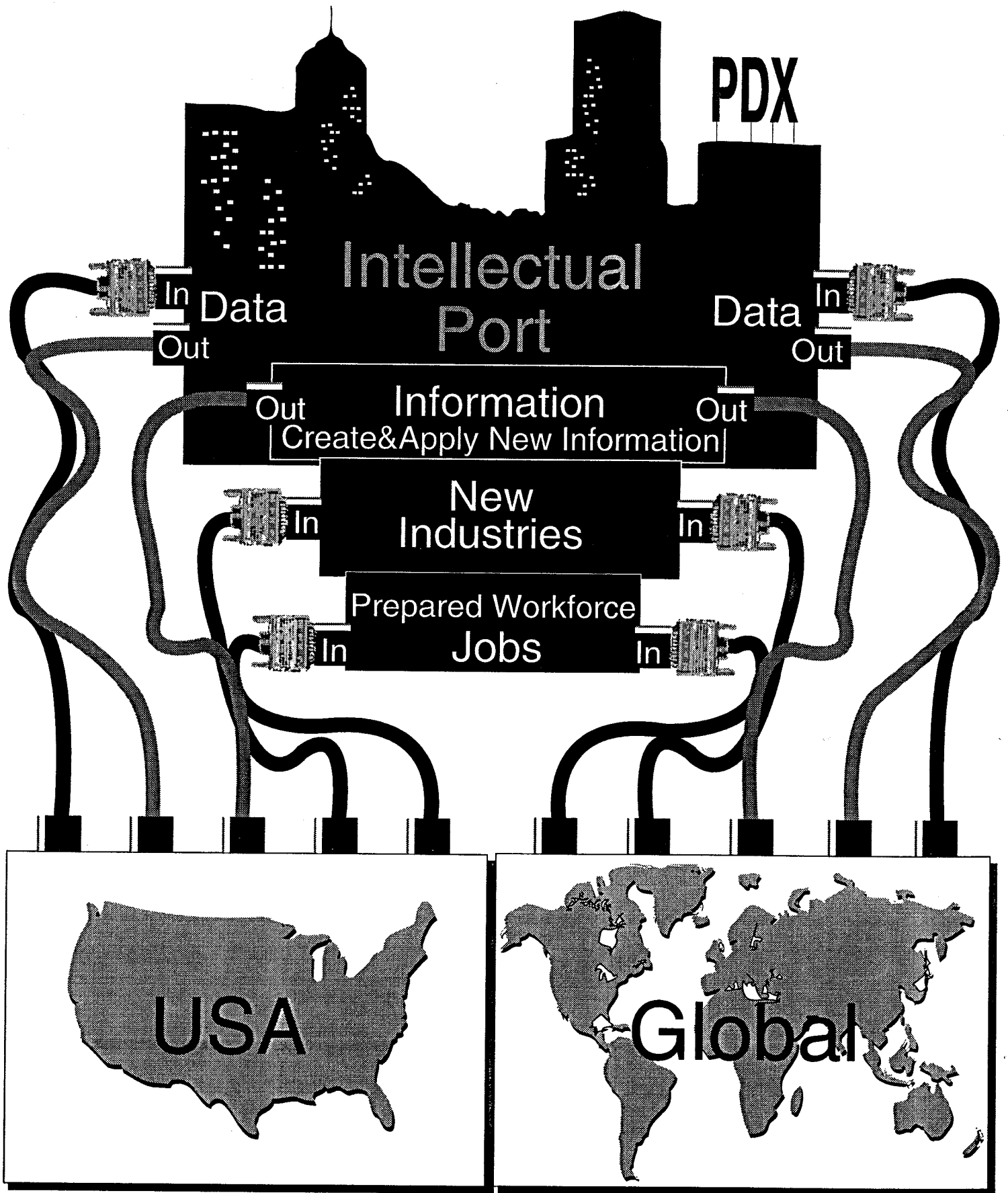
Education will have to

- o become an integral part of the business ecosystem;
- o assist citizens to become effective in a transnational economy by providing opportunities to learn foreign languages; to develop multicultural perspectives; and to understand economics at the transnational level;
- o assume a catalytic role in the creation of lasting partnerships with business, resulting in ongoing job creation and economic growth;
- o expand the basic and applied research capabilities essential in the creation of knowledge which in turn stimulates new, local business activity;
- o provide opportunities for lifelong learning.

Education will have to be supported by

- o easily and widely accessible information available through the barrier-free interactivity of a world class regional library system and its local partners;
- o a competitive educational infrastructure, including state-of-the-art technology.

Achieving this aspect of our vision will demonstrate the results of working collaboratively toward an attainable future of shared economic benefits.



3. *We believe educational institutions should shift from the governance of compliance to a new model of governance grounded in cooperation, mutual respect, and interdependence. Underlying this portion of our vision are common sense principles.*

- o Education in the Metro region should become increasingly decentralized. The more variety we have among institutions, the better are our odds of responding to the diverse needs of a growing population.
- o Institutional diversity must be protected so schools can meet their historical missions and experiment, if they choose, with new community-related projects.
- o Colleges and universities serve the community most effectively and most efficiently when they share responsibility, resources, and authority voluntarily.
- o Policy makers and community leaders can promote cooperation among institutions by keeping institutions fully aware of community needs and providing incentives to influence the directions Portland colleges and universities take.

Although jurisdictional lines currently impede inter-institutional cooperation, educators across the region share deep and enduring values. If our vision of the governance of cooperation can be achieved any where, it is in Portland where people listen to one another, value dedicated leadership, and accept consensus decision making.

4. *We believe higher education needs to restructure the way it operates financially.*

- o As increasing pressures on limited general funds continue, higher education will need to become more accountable for the quality and price of its processes (and products). Educational systems will need to eliminate redundancy, each sector specializing along competency-based lines.
- o Private sector money will need to be a major part of higher education's budgets. Strategic, interdependent partnerships will need to be a significant part of education's long-range plans.
- o In an industry where 80% of the expenditures are personnel costs, creative means will need to be found to decrease the cost of delivering educational services while maintaining quality.
- o The increasing emphasis on federal investments in applied research and advanced technology and on basic research related to potential industrial development will require Oregon to continue to develop joint scientific and engineering programs that draw upon the distinctive strengths of all its universities in order to offer sufficient expertise and quality to attract grants and contracts.
- o As higher education becomes increasingly critical for job preparation in the twenty-first century, financial support for its systems will need to increase as a percentage of Gross National Product.

Achieving this restructuring in the way we do business may be the biggest challenge the Portland educational community faces, but realizing this aspect of our vision will restore the credibility of our enterprise.

Until now, Metro has concentrated on what we can see, for example, highways, air quality, and green space, but we believe it is a logical extension for Metro to support the intangible asset of education. We envision a number of roles Metro could play.

- o Metro can be a central collection point for information about the educational needs of the regional community and assist the community in establishing educational priorities.
- o Metro can assist educational institutions in their attempts to work cooperatively by convening and facilitating cross-jurisdictional forums to address community priorities.
- o Metro can help fund the educational infrastructure which nourishes the quality of life in the region. In some instances, Metro can help raise funds to incubate new ideas which are especially relevant to solving community problems. And Metro can assist in maintaining a baseline of resources when the educational needs of the region are not met through more familiar sources.
- o Metro, which crosses jurisdictional lines, can serve as an informational conduit articulating community needs to education and, conversely, communicating education's capacities and capabilities to the region.

Ultimately, our vision rests on one simple premise. As Portland experiences inexorable growth and change in the next fifty years, education has an obligation, not just to keep pace with new conditions, but to take a leadership position and give voice to a vision we can actively support. Now, we are eager to hear the community's response to our key elements:

- o Creating an integrated system of all educational institutions in the tri-county region;
- o Seeing Portland become an intellectual port and a global city;
- o Choosing a model of governance based on cooperation, not compliance; and
- o Restructuring the ways higher education is financed.

We have taken vision making seriously for we know that the chance to chart a new direction comes very rarely. For this opportunity, we are grateful.

2040 EDUCATIONAL VISIONING COMMITTEE

AMBITIONS/ASSUMPTIONS

March, 1994

AMBITIONS

1. We cannot be content only to sustain our educational assets; the Portland Metro area needs to provide a spectrum of diverse institutions, a rich mix of institutions whose combined flexibility promotes quality.
2. We need to raise our collective/community level of ambition to make Portland a nationally recognized center for higher education and graduate study.
3. Oregon should move from being an importer of highly educated people to a net exporter.
4. We cannot let society divide into two camps, those with education and those without.
5. Facilitated access must be in place; higher education must relate to the rest of education; all education should be a seamless enterprise.
6. The research component for basic science has to be stronger in the Metro region.
7. The members of the business community have had little understanding of the role/value of education in economic development, and we have an opportunity to educate them.
8. The goal is good jobs for everyone; research matters in attracting good jobs of many types.
9. We aim for lifelong access to first-class jobs.
10. While we rely on many social institutions to inculcate the values requisite for a democratic society, higher education needs to affirm and to promote such values, especially those of free inquiry and civility.

MODELS/METHODS/MEANS FOR ACHIEVING OUR AMBITIONS

1. What might the structure of our industry look like in the future?
2. The first step to change the level of ambition is creating the willingness of Oregonians to be better educated.
3. Hypothesis: Portland has great comparative advantage, having some of the qualities of an ideal community. Metro's role in keeping the physical attributes of a premier community is essential. A concomitant commitment must emerge to develop the equally important educational attributes of an ideal community.
4. Distributed education has obvious and important implications for transportation which must facilitate the movement of people from one educational institution to another.
5. The Katz bill covers K-14; the rest is in limbo.
6. Greater interactivity across the spectrum of institutions can be created, regionally and statewide, through research focused on solving community problems. Portland is a good place, for example, to build a city for the elderly, and to examine a whole host of questions about the elderly.
7. We need to do a better job of explaining the vital role of education to the business community. This is an opportunity for us.
8. Using the list of key industries Portland is trying to attract, we can build our case for the importance of investing in higher education.
9. Although we do not yet have it, we should try to describe a new model of partnership between business and education to solve community problems.
10. The science/technical model offers a framework to support collaboration.
11. Solving community problems is another model.
12. For collaboration to work, core capacities have to be in place and sustained.
13. Strategic alliances and collaboration are relatively new in higher education; business, in this regard, has changed more rapidly than we have.
14. Although research is an essential component, it would be a tactical mistake to cast education's benefits solely in research terms. Research provides the quality component, but just as important are the role of education as recreational and the role of education in social remediation.

15. The University District is a compelling metaphor.
16. We need an inventory of our capabilities in education and research and our access to them.
17. We ought to be adaptable enough to educate people with the characteristics which will make them successful in the work place.
18. If we plot ourselves on two axes, austerity versus entrepreneurship, and internal versus external control, where are the institutions of higher education in the Metro area?
19. If we do needs assessment, and then measure how we've done, we can demonstrate our achievements.
20. What is higher education? Three components are:
 - a. Undergraduate - sophisticated, critical skills development, breadth of knowledge; not basic skills.
 - b. Specialized skills; specialized knowledge.
 - c. Continuing need for upgrading knowledge; knowledge will be a larger part of all our lives.We can't achieve any of the above without research.
21. We should challenge ourselves to describe research to the public, while retaining the important difference between knowledge creation and knowledge dissemination. Is the phrase "problem-solving capacities" a step in the right direction?
22. We should look at the list of qualities employers want the work force to have.
23. In a distributed system of education, we have some of the cells in place; connection is the next step.
24. As important as education is to economic development, we should not lose sight of the roles that democratic values and political stability play in economic growth.
25. We need to include a bold statement of why Portland should be a very special place, a beta site for what a community can be.

ASSUMPTIONS of January 26, 1994 Meeting

(Note - Key: * strongly agree; + likely; - disagree; ? needs more discussion.)

**1. The Portland Metro area is currently underserved educationally; core capacities are missing, e.g. a regional library. (Refer to #43 - underserved; #56 - library)

**2. One key ingredient of economic development is a superbly educated, world-competitive work force. (Refer to #6, 46, 63 - work force)

*3. Oregon's educational institutions do not have the capability to generate enough appropriately educated people for a growth economy. (Refer to #36 econ. growth)

-4. We will see profound, fundamental changes in higher education that are likely to obliterate our intuition based on extrapolating from past experience.

**5. A diversity of educational institutions is the best way to serve a diversity of educational needs. (Refer to #34,38,40 - diversity)

*6. The nature of the region's economy will demand compulsory, lifelong learning of the work force. (Refer to #2, 46, 63 - work force)

*7. External forces will push institutions of higher education toward greater similarity and integration, to be parts of a unified system. (Refer to #69 - integration)

+8. Quality differences will persist and Oregon will remain an importer of highly educated people.

+*9. Alternative providers will enter the higher education arena. Some will be for-profit, focused on continuing education, operating in the work place. (Refer to #79 - alternative educational services)

*10. Smaller, customized learning packages will be developed for local educational needs. (Refer to #70 - customized learning)

*11. Students in higher education will be less dependent on faculty for information. (Refer to #71 - student/faculty relationship)

+12. Faculty roles will change as they become part of professional cadres. (Refer to #28,55 - faculty roles)

*13. Students will prepare an educational portfolio of competencies and characteristics, suitable for many careers, not just one.

?*14. Educational systems will become more interdisciplinary. (Refer to #46 - interdisciplinary)

?15. Credible instruments of assessment are now and will remain hard to come by. (Refer to #33 - assessment)

*16. No priority class community in 2040 will be possible unless Portland is recognized for its world-class educated people.

+17. One of the most valued products a community can create is the collection of things associated with education.

?18. Accreditation will have to be revisited.

?19. Some research can be sited anywhere provided access and communication are available, while other research requires a specialized environment picked for specific reasons. (Refer to #22, 23, 52, 54, 72, 73 - research)

+20. We will see more intentional, collaborative community building. (Refer to #34 - community; #52, 53, 66, 81 - collaboration)

21. We will see an explosion in proprietary education. (Refer to #60 - proprietary educ.)

*22. Public research dollars will be increasingly spotty; private sector money will become more important. (Refer to #19, 23, 52, 54, 72, 73 - research)

23. Research will continue to define the premiere institutions, particularly at the graduate level. (Refer to #19, 22, 52, 54, 72, 73 - research)

ASSUMPTIONS Submitted Since January 26, 1994 Meeting

24. Public support for "public" education will continue to decrease as other societal problems will need to be addressed and higher education is forced to compete with other priorities (such as corrections and human resources). (Refer to #37, 43, 64, 74, 75 - public funds)

25. Distance learning through electronic access will become increasingly important in professional and graduate education. It will plateau as a minor part (less than 40%) of the overall education enterprise. (Refer to #50 - distance learning; #68, 76, 77 - technology)

26. Interinstitutional curricula will increase as they are reorganized to meet demands for special non-traditional programs.

27. Public and private institutions will continue to blend as consortial relationships are established, driven in part by economic concerns.
28. Faculty productivity will need to be measured in some more meaningful way in the future, and pressure will continue to remove tenure. (Refer to #12, 55 - faculty)
29. Undergraduate education should emphasize the centrality of teaching. Outstanding teachers should be rewarded.
30. Business persons and others in the world of work should be involved in decision-making processes and in teaching.
31. Universal values, e.g., civility, self-discipline, honesty, etc. should be communicated at all levels and in all practices.
32. There should be a better job of helping students learn - at a lower cost.
33. Effective assessment of learning (e.g., defense of a thesis at the undergraduate level) should be in place. (Refer to #15 - assessment)
34. Both diversity (among persons and colleges/universities) and a sense of community should be evident. (Refer to #5, 38, 40 - diversity; #20 - community)
35. Higher education will become increasingly a part-time rather than full-time activity for individuals. Most students will continue to devote a three or four year period to full-time study but part-time education will become a much more pervasive part of lifelong learning.
36. Higher education will be a major growth industry for the country and will grow in the Portland Metropolitan area at a greater rate than nationally. (Refer to #3 - econ. growth)
37. The economics of higher education will change such that most students will be directly paying for their educational experiences (or a third party will pay on their behalf). This will result in a smaller percentage of the overall education enterprise being publicly subsidized. (Refer to #24, 43, 64, 74, 75 - public funding)
38. Higher education will become broadly accessible and there will be more equitable participation in higher education throughout the community. Consequently, diversity will be a fundamental characteristic of all higher education enterprises. (Refer to #5, 34, 40 - diversity; #42 - access)
39. Beyond the mid-1990s, traditional college students - those who proceed directly from high school to enroll full-time in college - will be a clear minority among all students in colleges and universities. (Refer to #49 - traditional students)

40. The new majority will be increasingly diverse, including students who are returning to school after a considerable time away from formal education, or intermittent learners who complete their formal education on a part-time basis, often at several institutions. (Refer to #5, 34, 38 - diversity)

41. The new majority will include more women than men, older students seeking career changes, and more blacks and Hispanics than the traditional student population. (Refer to #45, 62 - population)

42. The desire to provide access to previously underrepresented groups will continue to put pressure on the resources of higher education. (Refer to #38 - access)

43. Previously underrepresented students, on average, have lower incomes and, as state funding for higher education diminishes, tuition increases will create ever-increasing student debt. This will lead to additional "stop-outs" as students attempt to earn enough money to continue their education. At the same time, pressure on the Federal budget will affect Federal financial aid policies and the availability of financial assistance. This trend will affect both traditional students who receive some support from their families and independent students. (Refer to #1 - underserved; #24, 37, 64, 74, 75 - public funding)

44. The accelerated movement toward national service as a means of obtaining financial aid will create the need for greater curricular flexibility and institutional sensitivity to the demands of coordinating community service opportunities with the design and goals of academic programs.

45. The population of Oregon will continue to grow, in part through in-migration of well-educated people. Oregon will add 500,000 people by the year 2005, primarily in the Portland metropolitan area, central Oregon and southern Oregon. The western states are already the most urbanized in the nation. Oregon, with 71% of its population already living in urban areas, will become increasingly urban in character. As Oregon continues to diversify its economy and moves further from its rural-based, natural resource economic traditions, additional access to educational resources will be demanded by both urban and rural areas, requiring new delivery strategies to support the work force needs of new industry and growing communities. Conservative estimates predict that the OSSHE must serve 80,000 students a year by the year 2000. (Refer to #41, 62 - population)

46. The undergraduate experiences of students will increasingly be related to work patterns and work expectations rather than to traditional on-campus aspects of undergraduate life (e.g. dormitories, Greek life, athletic teams). This vocationalism will create new pressures on the liberal arts and professional programs to work together since many employers are calling for both subject matter expertise and familiarity with teamwork, ambitious goal setting, problem-solving skills, a commitment to lifelong learning and ability to complete projects successfully. These qualities can be fostered by the creative design of general education curricula and revisions in the undergraduate major, as well as by appropriate community service and work internship experiences. (Refer to #2, 6, 63 - work force; #14 - interdisciplinary)

47. Changes in the design and expected outcomes of undergraduate programs will result in the need for special attention to articulation and transfer issues as different post-secondary institutions (both community colleges and four-year colleges and universities) design distinctive undergraduate curricula.

48. The completion of the school reform initiatives around the state will create the need for new admissions criteria for first-time freshmen and, at the same time, offer some "form giving goals" that will permit some consistency among the expectations for undergraduate performance at the many public and private post secondary institutions in Oregon.

49. At the same time, there will still be a demand for traditional college experiences and residential campus life. The system of 2010 will need to accommodate the needs of both undergraduate populations. (Refer to #39 - traditional students)

50. There will be increasing demand for access to advanced educational opportunities and graduate education. The vast majority of students seeking access to graduate education will be both place-bound and time-bound.

Graduate programs will need to be made available at various educational and industry sites across the state through a variety of extension or distance-learning mechanisms, many of which are already in use today (e.g. EOSC and COCC serving as host to programs delivered by faculty affiliated with one of the OSSHE universities, the PSU statewide MBA, jointly designed and delivered programs such as those being developed by the faculty associated with the Oregon Joint Graduate Programs in Business, instruction delivered over telecommunications networks and Internet). (Refer to #25 - distance learning; #68, 76, 77 - technology)

51. Colleges and universities will increasingly be asked to apply their expertise to the solution of social problems and to the enhancement of the ability of communities to solve their own problems. A natural starting point for reaching out to participate in the future of the community will be school reform.

Unlike previous reform movements, in which colleges and universities have been consultants and advisors but not true partners in achieving social change, the new reform movements in education will involve true partnerships or "anticipatory action research" in which public schools and post secondary institutions work together for mutual benefit and to ensure that students experience a smooth transition from one stage of education to the next.

52. Federal and foundation support will increasingly be directed toward facilitating community-based and interinstitutional collaborations focused on national and regional (including interstate) economic competitiveness or on urgent problems identified by the community, such as affordable housing, educational reform, technology transfer, and the development of emerging businesses. (Refer to #20, 53, 66, 81 - collaboration; #19, 22, 23, 54, 72, 73 - research)

The increasing emphasis on Federal investment in applied research and advanced technology and on basic research related to potential industrial development will require Oregon to continue to develop joint scientific and engineering programs that draw upon the distinctive strengths of all its universities in order to offer sufficient expertise and quality to attract grants and contracts.

The emphasis of other Federal agencies upon capacity-building and community-based solutions to problems will require all OSSHE institutions to maintain some community-based research capability so that each institution can serve as a community resource, making new ideas and effective strategies available to regional organizations, businesses, and community groups. It will also be necessary to provide an infrastructure to support interinstitutional sharing of research results.

53. For institutions with a primary emphasis on teaching, interinstitutional partnerships will permit a local post secondary institution to play the role of a broker of educational services and research activity, drawing upon the expertise and resources of other Oregon institutions to assist in serving local needs. In this way, all Oregon investments in education will be available to any Oregon community in flexible and cost-effective combinations that can change over time as needs change. A number of models are now being used in Oregon to facilitate these interactions across the state. (Refer to #20, 52, 66, 81 - collaboration)

54. Oregon will continue to invest in developing a number of "key industries," the majority of which will depend upon regular interaction with university-based researchers. To ensure a balanced diversification of the Oregon economy, research facilities and programs that match the local economic mix must be located in Portland and in the lower Willamette Valley. (Refer to #19, 22, 23, 52, 72, 73 - research)

These programs should be developed in a complementary manner through a shared strategy, as modeled by the graduate programs and research initiatives emerging from the collaboration made possible by the Oregon Joint Graduate Schools of Engineering, so that the foci of research excellence at each university are distinctive but also accessible through cooperation. This will avoid duplication of effort; and, at the same time, afford Oregon's key industries access to faculty expertise, wherever the faculty are located. The capacity created by OCATE and NERO should be studied as models for facilitating access to state of the art research and graduate education located throughout the state.

55. Changing expectations about the value and practice of both teaching and research will change faculty roles and require new ways to measure the collective contributions of groups of faculty who participate in interdisciplinary or interinstitutional. The future model of faculty scholarship will also be affected by the changing interests of faculty over the course of their professional careers. As is now the case in other professions, faculty will increasingly seek to change directions in activity and responsibility throughout their careers. This will require new ways to evaluate and reward faculty and to provide opportunities for faculty development. (Refer to #12, 28 - faculty)

56. Regional and statewide library networks will ensure access to research collections and databases, while supporting cooperative collection building among consortia of public and private institutions. One hub will be in Portland, consisting of the Portland Library System, PORTALS and the OHSU network; the other will be in Eugene. (Refer to #1 - library)

57. To protect both access and quality of educational programs and to make the best use of available resources, the OSSHE institutions will develop distinctive roles and missions, and will respond to clearly delineated educational, research and community service markets, statewide or regionally within the state. To meet special and complex educational demands, these distinctive institutions will work together to develop joint programs and partnerships to provide timely and cost-effective responses to the changing educational needs of Oregon communities. This will result in additional educational resources being available to the metropolitan area, primarily in the areas of graduate education and research capacity. (Refer to #58 - OSSHE; #65 - accountability)

58. A variety of strategies ranging from revenue enhancements to cost containment, productivity increases, or joint ventures will ensure careful investment of the resources for higher education. It will continue to be a goal of public policy, however, to protect access to a variety of educational options by maintaining at most OSSHE institutions a moderate tuition policy. (Refer to 57 - OSSHE; #65 - accountability)

59. To permit adaptation to distinctive markets, entrepreneurial approaches will be encouraged, including differentiated tuition and flexible program designs and formats for different audiences. These strategies will benefit the metropolitan area, where educational needs are especially complex.

In markets where most students are unable to pay a major share of the cost of their education (e.g. Portland, eastern Oregon), state general funds will be used to underwrite a greater share of the costs of academic programs.

60. The number of proprietary providers of educational services will continue to grow (e.g. Intel University, Motorola University) and these providers will compete with higher education institutions to serve the lifelong learning of individuals and employers. Greater freedom from state regulation and incentives for entrepreneurial activity will permit OSSHE institutions to compete with these new educational service providers or enter into partnerships with them. (Refer to #21 - proprietary education)

61. An aging population (Refer to Ramaley Memorandum - Feb. 11, 1994).

62. An increasingly diverse population (Refer to Ramaley Memorandum - Feb. 11, 1994). (Refer also to #41, 45 - population)

63. Changing work patterns will include increasing job complexity and increasing job mobility (Refer to Ramaley Memorandum - Feb. 11, 1994). (Refer also to #2, 6, 46 - work force)
 64. Competition for funding (Refer to Ramaley Memorandum - Feb. 11, 1994). (Refer also to #24, 37, 43, 74, 75 - public funding)
 65. Increasing expectations of accountability (Refer to Ramaley Memorandum - Feb. 11, 1994). (Refer also to #57, 58 - OSSHE)
 66. Increased collaboration among educational institutions (Refer to Ramaley Memorandum - Feb. 11, 1994). (Refer also to #20, 52, 53, 81 - collaboration)
 67. Increasing numbers of disabled students (Refer to Ramaley Memorandum - Feb. 11, 1994).
 68. Increased use of technology in deliver of education (Refer to Ramaley Memorandum - Feb. 11, 1994). (Refer also to #25, 50 - distance learning; #76, 77 - technology)
 69. There will be greater integration among the sectors of education -- K-12, community colleges, public higher education and independent higher education. Some examples of the emerging integration include: performance based admissions, joint access policy, 3 year degrees (based on the assumptions of school reform). (Refer to #7 - integration)
 70. Modes of instruction will move away from the old-fashioned 1x1x20 system -- that is one faculty member lecturing in one room to an average of 20 students; "customized learning" will be among the new opportunities. (Refer to #10 customized learning)
 71. Students will be less dependent on faculty for information and knowledge; they will be more dependent on them for guidance and perspective about what they have learned from data bases to which they have access through technology. (Refer to #11 - student/faculty relationships)
- We have to think through the implications for developing the next professionals. How do we best prepare the faculty of the future to help students convert information and knowledge to wisdom?
72. The research functions of public colleges and universities will become more independent of the instructional functions because of the sources of funding. (Refer to #19, 22, 23, 52, 54, 73 - research)
 73. The research and public service activities will become more closely aligned as the need increases for faster and faster delivery of new knowledge to the commercial and economic interests of the country and the states. (Refer to #19, 22, 23, 52, 54, 72 - research)

74. Changes in public priorities for tax-based expenditures will result in a smaller share of government support going to higher education. (Refer to #24, 37, 43, 64, 75 - public funding)

75. Pressure to reduce the costs per student will increase as less public money is appropriated to higher education and demands for access is at least constant; more pressure to examine and justify by means of a cost benefit analysis (CBA) of expenditures will ensue. (Refer to #24, 37, 43, 64, 74 - public funding)

One example: I expect institutions and faculty to take steps to narrow the curriculum in order to be more efficient in getting undergraduates to complete the degree requirements.

76. Technology will be the servant and enabler of change for how all three of the classical missions of colleges and universities are carried out. There are two types: enhancement and outreach. (Refer to #25, 50 - distance learning; #68, 77 - technology)

77. Expenditures for technology will increase as a fraction of the total cost of education. (Refer to #25, 50 - distance learning; #68, 76 - technology)

78. The political and economic conditions of the next century will require a greater number of intellectually agile citizens to take roles in an ever-changing work force and in the political and social institutions of the country. Higher education will be expected to develop citizens with the skills, knowledge, and capacity for critical thinking that are necessary for a competitive nation in the 21st Century.

79. Private entrepreneurs will develop alternative (for profit) educational services that will compete with the potentially weakened traditional institutionally-based delivery systems - spin-offs. (Refer to #9 - alternate providers)

80. The re-engineering approach as developed by Michael Hammer and Chaffee will inspire us to find new ways to provide student services and perhaps will lead us to experiment with instruction processes as well.

81. There will be an increase in interinstitutional collaboration for high cost programs (e.g. engineering.) (Refer to #20, 52, 53, 66 - collaboration)

82. In public systems of higher education there will be sharper differentiation -- and stratification -- between and among campuses. Words like "market niche" will appear in cabinet meetings and board rooms of higher education just as they have appeared in corporate America for a long time.

83. There will be new and innovative approaches to define the relationships of higher education services to the public interest which will be manifested in corporate/non-profit legal structures.