A Common Agenda for an Uncommon Future:
Address to the Sloan School of Management

Kay R. Whitmore
Eastman Kodak Co.

90s: 86-031
A Common Agenda
for an Uncommon Future:

Address to the Sloan
School of Management

Kay R. Whitmore
Eastman Kodak Co.

90s: 86-031

November, 1986

© Eastman Kodak Co.

Management in the 1990s
Sloan School of Management
Massachusetts Institute of Technology
Management in the 1990s is an industry and governmental agency supported research program. Its aim is to develop a better understanding of the managerial issues of the 1990s and how to deal most effectively with them, particularly as these issues revolve around anticipated advances in Information Technology.

Assisting the work of the Sloan School scholars with financial support and as working partners in research are:

American Express Travel Related Services Company
Arthur Young and Company
British Petroleum Company, p.l.c.
BellSouth Corporation
Digital Equipment Corporation
Eastman Kodak Company
General Motors Corporation
International Computers, Ltd.
MCI Communications Corporation
United States Internal Revenue Service

The conclusions or opinions expressed in this paper are those of the author(s) and do not necessarily reflect the opinion of Massachusetts Institute of Technology, Management in the 1990s Research Program, or its sponsoring organizations.
A COMMON AGENDA FOR AN UNCOMMON FUTURE
Address to the Sloan School of Management

Kay R. Whitmore
President and Executive Officer
Eastman Kodak Company
October 17, 1986

Good afternoon.

I'm honored to take part in this Triennial Convocation of the Sloan Fellows Program.

For all of us, this is a challenging time. Because, as the world has become complex beyond our imaginations ... we have access to that complexity at our desk tops. Now, we have nearly incomprehensible amounts of data available immediately, conveniently and globally.

Now, comes the difficult part. Now, we need to determine how best to use this information — how to put it to work to make our lives, our jobs and our futures ... more manageable.

That challenge is at the heart of this convocation and is worth our best collective minds. The technology that links our desk-top computers ... that joins our communication systems and our robotic support ... that technology actually links us all. We are all in this together.

And so the issues of achieving our full potential in this age of global discontinuity ... are issues of management, not of technology. And they will be solved not in the microcircuitry of ever-shrinking computer chips. They will be solved in the minds and in the interactions of people.

They are human issues ... and they depend upon the commonality of human qualities.

They center on the changes that are occurring — and will have to occur in us ... and in our relationships with each other. And, while the availability of technology compells their development, technology itself will be changed in the process.

To better understand the scope of these changes, we need to consider each separately ... to discuss the human issues that underpin them ... and to set forth a plan to make them manageable. We need to establish ... A Common Agenda — For Uncommon Future.
There are three items on my agenda ... three changes that we must make — in ourselves — if we are to realize our full potential:

- First — we need to develop greater creativity ... we must establish more innovative ties between business and academia. Together, we must continue to refine our understanding of what is needed ... and build upon our shared commitment to deliver it.

- Second — we need to demonstrate stronger leadership. As the world increases in complexity, we need to apply technology in a human context — to enable people to be supported by technology ... and to use it to make wiser decisions.

- And third — we need to take a global perspective. The arena in which we compete and manage and grow is a global arena ... and we will succeed — or fail — in a world market.

Let me begin, then, with our first common challenge — to develop greater creativity ... in the connections between business and academia ... between what we both need for the future and how we both need to help shape and provide it.

Our mutual connections must extend far beyond traditional research and development laboratories.

As you well know, the sources of funding for R&D at the university level have changed dramatically over the past decades.

In the 1950's, 60's and 70's, Federal spending for basic research in university environments gave birth to entire industries. Biotechnology, aerospace, and major elements of the electronic industries — all grew out of government support.

In the 1980's, that support has decreased dramatically. The current Administration has a private-sector orientation ... and yet at present, only about four-percent of the R&D programs at the university level are funded by private industry. That number will probably never rise above 10 percent.

Clearly, if we are looking for creative partnerships, we need to look beyond the laboratory, to establish new relationships with the academic community ... and to manage those as we do any other resources of our business.

From my perspective, one important link will take place in the management schools. Management In The 1990's is a case in point.

From the program's beginning two years ago, Kodak has been a full participant. There are two reasons for our participation:
First -- we are both a user of information technology -- and a vendor with a long-term commitment to the industry. We believe the insights we gain will have impact on the systems we provide -- and the way we manage the company -- as well as its information.

Our second reason is equally important: we see this program as a harbinger of the changing roles and relationships of academia and business in management education.

We've not been disappointed. Progress is being made. We are pleased with the efforts and we remain optimistic about the value of this program ... but we clearly still have a long way to go. Now -- nearly halfway into our five year commitment -- perhaps it's time to evaluate where we stand.

Let me just make three points:

First -- this program is beginning to provide a framework for a meaningful discussion of the future.

We recognize that "Management in the next decade" is a broad and complex subject. It's difficult to have a meaningful discussion around that ... but, with the talents and cooperation of the sponsors and the institute ... we've surfaced and resolved the overriding issues.

This program started with very ambitious goals. Now, it has a much more manageable shape and a much more attainable focus. The creation of the three Colleges of Interest is indicative of that progress.

What we find most potentially-beneficial about those colleges is this: They have been established on a cross-disciplinary basis to focus on broad issues.

At Kodak, this same approach is the basis for our business unit concept. Each unit is, in effect, a small, inter-disciplinary team. Each is staffed with people who bring specialization in different areas. Each has access to information and authority to make decisions. All are held accountable for results.

That business unit concept is our framework for the future. Already it's providing operational efficiencies. The use of a similar broad approach here -- in this program -- facilitates the transfer of knowledge.

My challenge to you in academia is to widen the use of that framework ... and to probe the limits of its possibilities. Academia will profit from that probing, but let me urge you to help the sponsors profit, also.
Speaking as one of your customers, let me encourage you to use this concept to help us to devise viable solutions more quickly ... to more completely and more profitably meet the needs of the customers we serve.

- My second point to celebrate in the Management of the 90's program is this: I commend your use of soft vision to give fuller meaning to hard data.

As a preeminent research institution, you have an understandable bias toward irrefutable facts. As a corporation, we share your bias. Given the choice, we would select complete and certain information for every step we take ... but today's competitive environment doesn't provide that luxury.

What is certain is not often timely ... and what is fully accurate is not often available. This is the age of complexity, ambiguity, and surprise.

We don't always have time to test the waters ... but we're always expected to make the waves.

That's why the sponsors provided a vision statement for the Management program ... and we're pleased you've found it useful. At Kodak, we have such statements for every business we're in — and they serve as guideposts for our future.

In that future, it will be imperative to balance traditional research ... with data that is "collected" in non-traditional ways.

We — in business and you in academia — need to be more comfortable with that balance. We must more effectively apply judgement and intuition and knowledge of our customers to determine what we want ... and then precisely measure only what we need. We can't afford ... and we can't wait for ... the alternative.

We're not any more comfortable with that than you are. Accepting the validity of soft vision ... and making decisions based on judgement rather than facts ... involves a cultural change for all of us. And change is easy only when it's happening to someone else.

My challenge to you is this: As you carry out this program, remember — the real advantage you are providing is not individual facts, as important as they may be. Your added value comes from your ability to conceptualize what all of those mean. It's the ability to think ... and to help us translate those thoughts into strategic actions.

The quality of thinking is at the heart of all quality — in products, in processes, in designs. If we are not thinking better, it is simply impossible to work better.
The quality of thinking ... the ability to think differently, creatively and productively ... that ability is -- and will remain -- your competitive advantage -- and ours. As leaders we must nurture that advantage -- by supporting, by guiding, by encouraging the use of soft vision to give greater meaning to hard facts.

• Let me make one final point about the Management in the 1990's program -- I applaud you for transforming roles in education.

Since their beginning, the worldwide educational systems have made clear distinctions between teacher and pupil, between professor and student. Since their beginnings, multinational corporations have made clear distinctions between managers and workers, between senior leaders and employees.

Now, in corporations, the role of management is changing. The authors of Reinventing The Corporation describe that change in these words.

"The top-down authoritarian style of management is yielding to a networking style ... where people learn from one another horizontally ... where everyone is a resource for everyone else ... and where each person gets support and assistance from many different directions."

I would ask you -- is what's been happening in the Management In The 90's program that different from what's been happening in corporate America? I think not. The challenge is to enable the changes to continue ... to broaden their impact ... and to accelerate the delivery of meaningful results.

Management In The 1990's is making a difference. It is beginning to show us both -- in academia and in industry -- the way toward a future that will require different relationships, involve different risks and offer different rewards. We all need to continue to apply our best minds -- and our full energies -- to productive solutions. For all you're doing to meet that challenge, I thank you ... and I applaud you.

As you continue to make academia more relevant to business, we in business are recognizing an obvious fact:

In today's world ... and in tomorrow's ... we simply cannot expect education to take place only in a formal institution. We must use the technologies of the future ... to help our people learn and apply the skills they need to make a difference.

At our corporate headquarters, we are doing that. More than 120 employees from our technical community -- engineers, scientists and technicians -- are now attending classes via satellite.

Today, we are receiving more than 50 different educational programs in all -- largely in the technical areas ... and that number is doubling every year.
Our network can go both ways ... and we're using it to broadcast our own programming to 60 major Kodak plants and offices throughout North America. This network can carry internal training programs ... as well as those involving customer education or management communications.

This capability is not unique to Kodak. And it's but one example in a field growing exponentially ... a field where video tapes, optical disks, interactive programs and live broadcasts are becoming the textbooks of the future.

As business managers, our challenge is to apply technology judiciously ... to supplement but not replace face-to-face communication. As leaders of academia, your challenge is to continue to develop relevant courses that both teach and challenge ... courses using methods and means that recognize — creativity will be an important key to a healthy future.

The second item on our common agenda is this: We must develop stronger leadership qualities in ourselves.

This may well be where our central management challenge lies ... because the leadership we'll need for tomorrow will be very different from the management we applied yesterday.

Think about it. Yesterday's managers had two primary roles — they predicted and they prepared. They created huge support systems to look deep into the future — and to bring back information on market conditions in a time further than the eye could see and the brain could comprehend.

Our plans were complete and comprehensive, but unfortunately, they were too often wrong.

Our giant information-gathering systems moved strategic planners further from business managers. Our huge control systems obscured business judgement. Our large staff groups separated us from our operations ... and moved our operations further from our customers.

To bring those systems forward, to make them more agile and more responsive, to build flexibility into our very structure -- all of that provides a major challenge for those of us entrusted with leadership.

In my mind, the leaders of tomorrow will have three prime challenges ... they will have three vital responsibilities:
• First — leaders must have a clear sense of vision — of what they intend to accomplish for both the long and short terms.

• Second — leaders must have a strong sense of renewal — an eagerness to create new opportunities through an entrepreneurial approach.

• Third — leaders must have a readiness to communicate — to handle controversy, to encourage trust and to respond to an increasingly diverse workforce.

Let me briefly describe each of those traits — especially as they relate to the context of our discussion today.

First — leaders must have a clear sense of vision — they need to have a new sense of where the organization is going and they must be flexible in how they get there.

In yesterday's environment, that vision was based on the numbers that were part of the company's databanks and information systems. In tomorrow's environment, the vision may be supported by numbers and data, but it will be based on intuition, on customer experience, on business judgement.

That vision recognizes the necessity of organizational and technological transformation. It's not enough to remove deficiencies from what exists ... we need to create discontinuities by what we conceive.

How will we do that? The answer is — with difficulty.

But let me be clear — it has always been difficult for leaders to create visions, to conceptualize their goals. It just looks more difficult today because our activities are surrounded with complexity ... time cycles have collapsed ... and competitive pressures have mounted.

To manage in that environment, we need to demand more of the technology we are using, we need to require more payback, sooner — from the systems in place. We need to use our programs as we would use any of our resources — to provide a distinct competitive advantage.

In our research laboratories, our specialized modeling and computer simulation tools are cases in point.

Over the past forty years, as we introduced new generations of color film, our method of experimentation was straightforward — we would mix a new emulsion ... coat it ... test it ... modify it ... and start again. That's an over-simplification, of course, but it's essentially correct.
That method worked, but it was time-consuming and expensive.

We took a different approach when we designed the newest members of our product family. To develop those, we used a computer simulation model... to test peoples' preferences for color rendition.

We showed 2500 people the variations that were technically possible ... and we let them select what was aesthetically pleasing. And we did all that before we mixed the emulsion, before we did the coating, before we offered the actual product.

The savings were substantial in cost and time ... but perhaps the most dramatic results came from the marketplace. Our new films are the most successful we've ever introduced ... everywhere in the world.

We are, of course, not alone in using computer simulation models. Automobile manufacturers, aerospace and appliance companies ... and a host of others are using this technique to "see" complete factories ... before the ground is broken.

Technology is making a difference: It's helping leaders to realize their visions.

Let me move to my second requirement of a leader -- the strong sense of renewal.

If there's one thing that all of corporate America would agree on, it's this: We need to encourage the entrepreneurial spirit that's alive in our country today. We all need to flex our entrepreneurial muscles.

At Kodak, we're doing that through our venture process.

For us, a venture often starts in our Offices of Innovation. Today, we have about 20 of them around the company where anyone can take an idea ... and receive both formal and informal help to add strength to the idea.

Last year, we received more than 600 ideas for products ... concepts ... or processes to grow our business. Of all those submitted, about three quarters related to our traditional product lines ... and many of those have been incorporated into products now in the marketplace.

For those promising ideas outside our mainstream, we provide a modest seed grant to do whatever is necessary to lead to a business plan.

As one example, our new line of Kodak batteries were developed by Ultra Technologies -- which was established as an internal Venture just two and a half years ago.
Ultra Technologies is both a good example ... and an anomaly. It proves ventures can be successful ... but we expect few others to develop a product line with such full potential.

But a full product line is only one measure of success. Equally important is the contagious spirit of the Venture members — their instincts to challenge what exists, their eagerness to try something new and their readiness to inspire the entire enterprise.

If you want a wider example of the same spirit, I would direct your attention to Route 128 — the second largest hub of small business in this country ... and a testimony to the leadership and vision of those who have been — and are — a part of the MIT community.

But let me reemphasize a fact that's becoming increasingly obvious: The creation of entrepreneurial enterprises is simply the first stage in what needs to be a multiple stage plan for growth and leadership. Too often, entrepreneurial enterprises grow only to a certain stage and stagnate.

To grow beyond that ... to gain critical mass ... they require a leader with the vision to conceptualize a network — to see how individual organizations can create a whole that's more than the sum of its parts.

In our own company, we are networking two of our Boston Beltway units — Atex and Eikonix — with other Rochester-based units to create a more effective and more capable system for the printing and publishing industry.

That system will enable customers to electronically design, layout, proof, and make up complete pages with all elements in place. More than linking functions ... the system links people, enabling them to work together more effectively. And that will be the true measure of acceptance for any system in the future.

Let me move — briefly — to the third mark of a leader — the ability to communicate.

Through clear and consistent communication, a leader encourages and enables each member of the workforce to take ownership of the vision ... to share a commitment for growth ... and to adapt more quickly to changing circumstances.

Today, all of that is made more difficult by an increasingly diverse workforce.

How diverse? Well, thirty years ago, the profile of the average American worker looked like this:
• He was a white male ... with a family ... whose wife stayed at home with the children.

• He was forty years old ... remembered the Great Depression from his childhood ... and was motivated by job security and steady pay.

• He respected authority ... was satisfied with his place in the organizational heirarchy ... and expected to retire at sixty-five.

The picture looks very different today. Today:

• Women now account for 43 percent of the civilian U.S. workforce ... they fill nearly a third of all managerial or administrative positions ... and they dominate some job categories — such as insurance adjusters and computer operators.

• The white male worker is now represents less than half of the U.S. laborforce — down to 49 percent — from 63 percent 30 years ago. And the percentages of Blacks and Hispanics and others are on the increase.

• And the typical worker is increasingly motivated by flexibility in work schedule ... and eagerly accepts a certain amount of risk in exchange for the possibility of a superior reward.

As leaders ... and as shapers of the next generation of leadership ... our biggest challenge is learning to communicate with the new workforce. That will clearly involve reinforcing human relations principles ... and honing key skills:

• We need to be more comfortable contributing ideas — rather than giving orders.

• We need to share visions in terms understandable to our people — rather than in concepts that glaze the eyes and numb the mind.

• We need to look for opportunities to delegate and to trust — rather than taking opportunities to dictate and to duplicate.

• We need to set goals — rather than establishing limitations ... to tell people what we expect and encourage them to exceed those expectations.

• We need to rely more on peoples' judgement and intuition — rather than relying extensively on data systems and lengthy reports.
• We need to define jobs in terms of tasks — rather than defining them in terms of time.

• We need to use our information systems to provide support and credibility ... rather than using them to add complexity and complication.

• We need to learn by listening ... rather than managing by talking.

• We need to discipline ourselves to look for the central issues — rather than being distracted by the abundance of information.

• We need to hold fast to our values as we modify our culture ... rather than holding to our cultures and compromising our values.

• We need to look for opportunities to communicate with our people face-to-face and issue-to-issue ... rather than managing them through memoranda and staff reports.

• We need to make people know they are important — rather than letting them know how important we are.

• And, in all our communications, we need to be honest, be forthright, and be clear — enlightening and encouraging others, rather than confusing and impressing them.

To me, those are the axioms of leadership — and while they have been relevant in every age ... they are imperative in this one.

#       #       #

Let me move now to the final item on our common agenda for an uncommon future.

As we all exercise leadership, we need to take a global view.

There's only one arena in which to operate and succeed and grow for the future ... that arena is the worldwide market.

• Global exports reached one and three-quarter trillion dollars last year — up 7 percent from 1983. This year, exports from industrial countries are running far ahead of last year.

• Trade ministers from the 92 member nations of GATT, who met in Uruguay last month, had a major focus: To liberalize trade regulations.

• And for a very specific example of how that trade works, consider this: 95 percent of the baseball mitts used in the game are made from American cowhide ... which is shipped to Brazil for tanning ... before it's finished in Japan.
All of that reemphasizes: We are in a highly-integrated international economy. By the end of this decade the world will have one billion telephones, all interconnected ... and almost all capable of being dialed directly to any other. Now, we're seeing the marriage of telephones to computers ... and some analysts believe the computer-phone market could be worth a billion dollars by 1990.

Global models don't behave as they did in the past. Today we all need to factor in the growing — and changing — economic links among countries — and the politics that govern them. We need to realize that economic growth can no longer be a zero-sum game. And we need to recognize — to be successful, we must be world class at the functions we perform.

To be world class, we need to benchmark our functions against the best in the world. We need to be sure that we — each of us — as individuals — are among the very best at the jobs we hold. And we need to be sure our organizations have a leadership position — in cost or uniqueness in every function they provide.

This benchmarking process will require extensive information support to identify the standards ... and to move us beyond one dimensional comparisons. But that benchmarking cannot be done from our offices and our factories. To gain a true picture, we need to look at ourselves from our customers' — and our competitors' — points of view.

Two examples come to mind:

• First — for some time, we in Kodak have studied the Kaisha — the Japanese corporation. We've read the books ... reviewed the information ... and measured ourselves accordingly. But, when we forced ourselves to actually travel across the Pacific ... and spent some time inside the Kaisha, our perspectives changed. We began to see ourselves — our methods and procedures — through Japanese eyes ... and it was a revelation.

• My second example is more general. Since early times, cartographers and scientists have charted and analyzed our planet ... and we believed we understood its interrelationships and delicate sense of balance. But what a different understanding we gained in 1969, when members of NASA took this photograph from another point of view ... and we gained a fresh perspective on this fragile blue ball spinning in space.

As we strive to gain that fresh perspective, information becomes a resource that can add value to our operations — on a global basis. The key to our collective success will be how well we manage the flow, use and feedback of information among all people — and machines — involved in this process.
Information technology — in its many forms — will help us carry out this approach. The network of that technology may involve everything from desk-top computers to factory floor robots, but its purpose will be clear: To use information for what it was designed to provide — excellence now ... and a strategic advantage for the future.

We cannot yet determine the exact dimensions of the future, but we can guess at its outlines. We can already see tomorrow begin to take shape.

Tomorrow, management hierarchies will continue to flatten.

Nearly thirty years ago, Peter Drucker put that thought in these terms. He said:

"We organize around the absence of information."

Today, the information that once was gathered and presented to senior management by middle management is, increasingly, gathered and presented by the computer and by networks.

Information is power ... and electronic systems are spreading that power to increasingly lower levels.

Business Week estimates that since 1979, middle management — worldwide — has shrunk more than 15 percent. In some places, such as the small high-tech firms of West Germany, the figure reaches 50 percent.

As middle management shrinks, its functions are taken over by first-line managers ... and by upper management. Decisions are being made more quickly ... at whatever levels all necessary elements come together. And those decisions are based upon more complete information.

The results will be that the 90's corporation will look both flatter and busier: fewer layers of management, with intensified activity at the top and the bottom ... with all members closer to the customers they serve.

The rapid flow of information is progressing ... and one of the best examples is right here in Massachusetts.

Boston represents by far the biggest city to have made the transformation from a traditional industrial economy to the new information economy.

The 167 member companies of the Massachusetts High Tech Council want to accelerate that shift: They are engaged in promoting Massachusetts as the ideal location for "creating, operating, and expanding high technology business."
The products and services from this — and other high tech centers — will increase the pace and value of communications and information. The linking of network to network will continue to expand ... creating electronic nerves and ganglia spanning the globe.

This has business implications in so many areas that none of us will be unaffected ... and the questions will become more difficult:

• Does anti-trust legislation apply to alliances which come about as a result of electronic integration?

• To what extent is it practical, or desirable — or even possible — to keep information within a company?

• Will the patent process be strengthened — or will it become more confusing because of the difficulty of differentiating the proprietary from the public information in electronic repositories?

• Will the money spent on expensive networking produce a payback in information gained?

• How can we — the leaders of my generation — become more comfortable with personal computers?

The answers lie somewhere in our collective futures. In those futures, everyone will be a manager, a user, an owner of information. Information will be at the heart of our jobs — and our lives. It will be the basis for doing business — and for succeeding — in the age of discontinuity.

This, then is our challenge and opportunity ... our common agenda for the future:

• To develop greater creativity — to establish more innovative ties between academia and business ... and to share mutual success.

• To demonstrate stronger leadership — applying high technology and human intuition to create a healthy future.

• And, finally, to demonstrate a wider vision — a global approach to the arena in which we must live and work and grow.

It is no longer enough to sail with limited charts, scanning just a tiny portion of the business and academic seas and traversing them over and over.

That worked in yesterday's society ... on yesterday's assembly line ... in yesterday's lecture halls. Yesterday, it was enough that each worker do one small job again and again ... last year's course still contained all the relevant information.
In today's society ... and in tomorrow's ... none of that will work. The expectations and the pace have picked up dramatically, and organizations can only keep afloat if they can perceive the whole ocean.

With vision and business judgement — and supported by systems and technology — we can attain that perception. In fact, each of us must attain that scope in order to stay competitive. The world expects no less ... we must accept no less of ourselves.

More than a quarter century ago, a young man from the Boston area, John F. Kennedy, expressed our common challenge in these words. He said:

"To meet our responsibilities will take determination, dedication and hard work.

"There are new problems, new dangers and new horizons. The world is changing — the perils are deepening — the irresistible march of history moves forward.

"We must now take the leadership in that great march — or be forever left behind. Now is the time to refreshen our spirits and stir our hearts for the tasks which lie ahead as we celebrate the past and awaken the future."

To Mr. Kennedy's words, I would add this. I'm confident that — in your hands — it will be an innovative, exciting, and uncommon future.

Thank you.