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Appendix A Company Profiles

Appendix B LMI’s Best Practices Survey
Chapter 1
Introduction

At the beginning of each fiscal year, officers of the Logistics Management Institute (LMI) direct a specified amount of internal funds to the independent research and development (IR&D) program. The selected tasks are based on proposed topics submitted by staff members. The IR&D projects are typically funded to provide LMI’s research staff with an opportunity to explore current management challenges facing the public sector. The IR&D program is a critical part of LMI’s ability to maintain cutting edge management consulting capability. It also allows LMI to introduce innovative management tools and methods into public-sector organizations.

FROM METRICS TO PROCESSES

For the past several years, LMI’s Facilities and Economic Impacts Group has spent a significant amount of resources and energy in building a comprehensive facility benchmark database. The data set is a compilation from numerous reliable sources providing statistics on key building functions. These include operational areas—such as maintenance, utilities, security, environmental management, and cleaning—as well as construction, leasing, management, staffing, and others. The data come from well-known clearinghouse organizations, associations, industry contacts, LMI surveys, statistical models, and open literature. They cover every major metropolitan area in the United States, as well as hundreds of suburban and rural communities. The central function of the database is to create metrics that allows public-sector managers to gauge the performance of their industry peers in the same types of functions.

The benchmark data have been instrumental in helping several defense and civil agency organizations establish performance baselines, identify gaps, and work toward realistic goals for working more effectively and efficiently—and less expensively. They serve a larger goal in helping public-sector organizations discover the possibilities outside their own walls and, ultimately, make more efficient use of our taxpayer dollars.

While the database has served as a cornerstone in helping to initiate change, our experience has taught us that data and metrics can take us only so far in implementing better ways of doing business. The benchmarks serve as indicators of where additional analysis is needed to explain why costs are out of line with typical costs of similar organizations.
Sometimes, the explanations lie in special government needs, regulations, or high security environments, but often they lie in processes, management concepts, and even corporate cultures. We therefore saw merit in identifying common factors that lie behind the low benchmarked costs of excellent companies.

To address this issue has meant turning from metrics to processes because it is process that will provide the insight into achieving best-in-class performance. This change does not diminish the value of quantitative benchmarking. To date, LMI has focused primarily on facility data and metrics. That approach has been worthwhile because it has allowed public sector managers to take actionable information and make fast, well-informed decisions to reduce facility budgets—without getting mired down in lengthy process reviews that are often misdirected and costly.

The use of LMI's benchmark metrics has given public-sector managers the information they now need—having already initiated significant change—to focus attention on the high-cost, critical success factors that drive performance. It is these key process areas—such as business planning, the amount of automation employed, and how investment decisions are made that are deserving of review. And, it is these areas on which we now focus to learn more about the implementation of excellent practices in facility management. But this next step would not have been possible without first making a concerted effort to fully understand what the benchmark metrics and data were telling us, and what practices really required new insights. This is why we are confident that in this survey we have asked the right questions and focused on the right processes, ones that will benefit organizations that are looking to make fundamental facility management improvements in the coming years.

**PARTNER SELECTION**

We were interested in identifying companies with a broad cross-section of facility requirements and uses. In other words, we sought facility professionals who work not only for facilities service firms, but for firms where facility issues are not a core business function. This ensured that we covered cases in which a firm operates facilities either (1) because it's their business or (2) in order to accomplish their nonfacility business goals. With this in mind, LMI solicited firms with a history of corporate excellence—in time relying primarily on the ones for which facilities are not the core business, that is, those that consider facilities simply a means to an end.

We did not attempt to partner with any government organizations because a goal of the research effort was to explore private-sector practices. Implicit in this approach is the assumption that government organizations should attempt to emulate the private sector. Although this is true in some respects, LMI recognizes that this assumption should not be made without careful deliberation, and that government organizations cannot always act in the best interest of citizens by following the
most efficient private-sector business models. Still, industry can potentially transfer many important lessons—for operating more efficiently while still delivering superior service—to public-sector organizations. We fully understand that many public-sector organizations are already taking full advantage of best practices both inside and outside the facility management field.

What do companies in pharmaceuticals, electronics and missiles, computers, telecommunications, real estate services, and maritime systems have in common? They all own, lease, operate, and build facilities. While these private-sector companies have varied missions, goals, and markets, they cannot fulfill their objectives without facilities. More importantly, they can not fulfill their objectives and remain profitable unless their facilities are managed in the most efficient manner at the lowest possible cost.

The firms that assisted LMI in this effort asked nothing in return. For this, we are deeply grateful. The visits provided us with common and recurring themes, as well as individual, unique insights into the facility business that demonstrated a high level of professionalism and expertise.

LMI visited with only six firms, all of them between July and September 1998. Together, however, they own, manage, and lease more than 500 million gross square feet of building space. Consequently, our partner sample is a fair and representative look at the current state of facilities. The participating firms (Appendix A contains brief profiles) are listed below in the order that we visited them:

- Abbott Laboratories, Corporate Plant Engineering Operations, North Chicago, IL
- Lockheed Martin Corporation, Electronics & Missiles, Orlando, FL
- IBM Corporation, Real Estate/Site Operations Division, Yorktown Heights, NY
- MCI Telecommunications Corporation, National Construction, Arlington, VA
- CB Richard Ellis Facilities Management, Inc., Facilities Management, Atlanta, GA
- Raytheon Systems Company, Naval and Maritime Systems, Operations, Mukilteo, WA.
BEST PRACTICES

We did not use a typical benchmarking methodology as part of this research effort because we were not attempting to achieve process improvement in any one particular functional area, nor for any particular organization. Rather, our goal was to discover some general recurring themes among leading private-sector organizations and discern the way they manage their facilities for maximum effectiveness. The result is not a set of specific practices that can be readily adapted by an organization for immediate performance improvements in facility management.

Similarly, we did not attempt to collect massive amounts of information, but we did ask each company to provide us with a minimal amount of data so that we could develop a company profile and a baseline understanding of their facility performance.

Of what use, then, are the practices discussed in the next chapter? They demonstrate what it means to manage facilities under the discipline that is imposed on every organization that operates in a competitive market environment. So they are useful in that they provide important management philosophies and insights into the way that private-sector companies get the most out of their facilities—in the most difficult of budgetary settings. Invariably, the facility organizations with which LMI met have faced year after year of reduced facility budgets. Yet, they still manage to provide a level of service that any office worker, researcher, or employee would gladly accept. Since this report is for public-sector facility organizations, many of which are facing similar budgetary pressure, this is invaluable information.

FINDINGS

As previously stated, the findings in this report are not readily implementable practices that will transform an organization into a finely tuned business machine. And not every practice will be right for every organization. Implementation always requires careful planning and deliberation. Notwithstanding, every facility professional we visited has faced reduced budgets and demands for more efficiencies—even when they did not think any additional gains were possible. But each responded to the challenge in an innovative way, doing what was required to allow their respective organizations to thrive under the pressures of a competitive market. It is this success that acts as the basis for this report.

The report is not a facility “how to,” nor a step-by-step manual on streamlining operations and achieving cost savings. Rather, it is a compilation of actions, decisions, philosophies, and strategies that allow leading organizations to get the most out of their facilities. We hope that these best practices will be read by public-sector facility managers in this spirit and will serve to stimulate further thinking—so that public-sector organizations can get the most out their facilities, too.
Chapter 2
Effective Facility Management

KEY CONCEPTS

The facility professionals with whom we met provided a lot of information for us to process. The six partner companies in this study have not fully integrated all of the concepts into their everyday facility management functions. Some have adopted most of them, others just a few. Probably none of the companies takes advantage of everything that appears in the following pages; companies do what works well for them, which depends on the specific requirements in a given business environment. However, we wanted to provide as much information as possible; it will be up to the individual manager to decide what will work and what will not, given the administrative, organizational, and political circumstances.

We have grouped all of the practices into three key summary concepts because almost all of the practices can be classified in one of these areas. These three key attributes are the underpinnings of facility best practice implementation:

⇒ THINKING STRATEGICALLY ABOUT FACILITIES

⇒ THINKING ABOUT AND MANAGING COSTS EVERYDAY

⇒ REGULARLY COMMUNICATING WITH CUSTOMERS.

This chapter presents the details for each of these attributes. Best practices are addressed as subheadings of key facility concepts.

STRATEGIC THINKING

Setting Priorities

Pareto or ABC analysis is routinely used to help management focus on the important issues. In managing day-to-day facility crises, it is easy to lose sight of the long-term goals of the company. Listing all the current and potential issues can help determine the most important 20 percent that should receive 80 percent of attention. For example, most of the facility organizations we visited made time for long-term planning despite the daily demands of short-term problems. They took the time for thorough economic analysis before committing resources and for regular communication with their customers.
Real Estate Assets

The most important practice associated with private-sector facility management is maximizing the productivity of real estate assets. The firms we visited own, lease, or manage millions of square feet of space. It is only through careful planning, capital allocation, expense management, and efficient use of space that these firms meet their business goals. All of the firms with which we met suggested that expense management is an important function of short-term, day-to-day management, but it plays only a limited role in long-term cost savings.

The key for major savings and cost avoidance for facility organizations is to ensure that the scope of real estate assets reflects the current business environment: less space in times of downsizing, more space (timely acquired) during periods of growth. This requires that facility managers closely cooperate with the business unit so that projected company needs can be met. It also requires constant long-term planning to ensure that leases are not renewed when space requirements are diminishing and that organizations are prepared to relocate, downsize, or expand with minimum disruption to the business. Four of the six companies we visited maintained formal facility management plans ranging from 2 to 5 years.

Decision-Making Factors

PROJECT JUSTIFICATION

Before any of our interviewed companies make major facility investments, they follow strict approval processes and measure the investments against financial and nonfinancial criteria. Projects have to fit into the company's strategic or business plan and are subjected to standard economic analyses to see if the payback justifies the investments. Most of the companies require proponents of projects or other initiatives to present return-on-investment (ROI) analyses. Another common requirement is to show a reasonable payback period, the most common being 1 year, or 2 years at most, unless the initiative is safety or health related. Even the smallest capital projects are regarded as serious decisions.

EXPENSE-TO-REVENUE RATIOS

The firms with large building inventories do not treat operating expenses and recapitalization separately. By making effective use of expense-to-revenue (ER) ratios as input for real estate capital allocation models, companies can interconnect the two in the business plan. Managing funds efficiently means that more resources are available for new construction, as well as small and large renovations. The use of ER ratios implies the use of a highly functional information system that tracks not only budgets, but actual expenses. Only actual expenses allow a manager to know how much is being spent for specific components of building operations. For two of the companies we visited, tracking actual expenses is so important that they have implemented daily timesheet systems for their facility management staff.
Cost-Effective Information Systems

During our visits, we expected to see sophisticated, high-end computer-aided facility management (CAFM) and information systems, but this was not the case. Instead, each of the industry partners has implemented modest, cost-effective management information systems, without spending exorbitant funds to achieve acceptable levels of functionality. Lacking a defensible ROI, none of the facility officers with whom we met has been able to successfully persuade the executive officers to make a commitment on a high-end CAFM system. “We’d love to have a CAFM with all of the bells and whistles,” said one facility officer, “but we just can’t find a way to make a convincing argument for such a significant overhead investment.” Another location had opted for a Web page with a full suite of facility information instead of a CAFM because it was a much less expensive.

The automated systems in place are typically low-end systems that track time by project and maintenance costs.

Contracting

We found that contracting out noncore facility management functions is prevalent. One company allows in-house work forces to compete with the contractors bidding for their work, with awards going to the organizations demonstrating the best value to the company. As with all important decisions, the economics of a contract versus an in-house work force are carefully analyzed.

Companies generally try to form partnerships with contractors and alliances with vendors to avoid adversarial relationships. This is easier to do in the private sector since contractors can be far more easily dismissed. Moreover, contractors know that if they perform poorly they have no chance of being considered during any recompetition. (Such blacklisting is not possible in government contracting.) An owner-contractor partnership requires an element of trust, but companies deem the benefits of cooperation worth the risks.

Another common trait is the preference for contracts that are national in scope. These contracts capitalize on economies of scale and reduce the company-wide resources spent on contractor acquisition.

EVERYDAY COST MANAGEMENT

There is no more enduring symbol of cost consciousness than a stock ticker. Two of the facility organizations that we visited had large electronic displays prominently visible and showing the company’s stock price in real time. The display is a powerful incentive for employees with stock options to be mindful of how they manage costs.
As in the public sector, budgets in the private sector are forecast to do more with less. For example, one company’s policy is to hold the operations and maintenance budget constant each year, which means a reduction in spending power equivalent to inflation. The facility management function has worked hard to find ways to economize yet maintain levels of service. The big difference, however, is that the private sector is driven by the bottom line and not their annual budgets. There is no drive to spend at the end of the fiscal year because a particular fund is under budget. Instead, managers are evaluated on what they have spent and if they end the year under budget they are looked upon favorably. The result is that the managers with whom we spoke are more conscious of the cost of materials and time than are their government counterparts.

There is an element of internal competition in the company culture that helps to contain costs. Financial incentives are tied to executive performance, and profit sharing is common. Although these measures are not available to government managers, other private-sector practices are: peer comparisons, group goals, and property-to-property comparisons are common. One company uses performance management teams to find ways to reduce costs or fix facility problems. For example, a team was formed for heating, ventilation, and air conditioning. Each team’s success is measured by the ROI of its recommendations, and team members are rewarded for improvements with bonuses. A team works only in the area of its functional expertise and disbands once its goal is achieved. Participation is not voluntary; team leaders are employees with high potential and their success on the teams is closely monitored.

Cost analysis is a constant in the private sector. The companies in our study use trend analysis, radar charts, ER ratios, and cost performance measures as their tools in these analyses. Companies also take benchmarking seriously and index different facility types to facilitate cost comparisons.

Another common practice to control costs is activity-based management. Cost accounting systems are designed to gather costs not by budget-defined accounts but by activities that are meaningful to managers and customers. Once the true cost of an activity is known, it can be analyzed for ways to reduce it.

Half of the companies we visited use facility management chargeback systems. Chargebacks keep facility managers under constant cost scrutiny by their customers. One facility manager told us that the chargeback system forces a reduction in staff. This confirms our experience in helping government organizations implement chargeback systems, which are called working capital funds or franchises in the federal government. These funds force managers to be very knowledgeable about their true costs.
The advice we received on cost cutting in the private sector came with some cautions, however. Cost reductions take time. Companies pointed out that you cannot cut too deeply too quickly or costs will soon rise again. One company took almost 3 years to reduce its operations and maintenance costs per square foot from $1.00 to $0.50.

COMMUNICATING WITH CUSTOMERS

Making Customers Partners

The only way for several of the companies we visited to reduce operating costs was to reduce service levels, especially when they did not employ chargeback systems for operations and maintenance. Companies found an advantage in engaging customers in cost-cutting brainstorming sessions. Cost-cutting ideas included reducing daily pickups of sanitary trash and focusing on removing timesensitive trash. Trash was color coded, for example, blue for recyclable and yellow for organic. Since daily cleaning schedules are expensive, vacuuming and some mopping frequencies were reduced to weekly.

The companies cited examples of the way customers appreciated being part of the cost-cutting process and how that led to eventual recognition of the need to cut services. However, any reductions in service must be preceded by extensive customer education campaigns on why service must be reduced and what the reductions are. Often, facility managers must orchestrate a cultural change before reductions are accepted.

Customer Feedback

All but one of the companies we visited has extensive customer feedback mechanisms, and the remaining one is searching for ways to implement one. The feedback mechanisms ranged from distributing forms to customers to soliciting comments via a Web page. The typical goal is to achieve more than 85 percent positive comments. More importantly, the suggestions and negative comments were taken seriously and acted upon.

Access to Information

Of the companies with which we met, only one had yet to allow its facility management customers some form of access to its automated facility management information. Even the single exception was looking for ways to allow customers to access such information at the summary level. Methods of access varied. One has a Web page for customers to use; others allow customers read-only access to their CAFM systems.

The advantages of allowing customers access are twofold. First, the customers appreciate being able to check on work status directly without having to go
through the facility management staff. It creates constant pressure on the facility staff to perform, and oversights and tardy responses are quickly brought to the staff’s attention. The second advantage is that telephone and walk-up inquiries are reduced when the latest information is readily available on-line. This advantage comes with a caveat, however. Substantial customer education is needed to ensure that they understand what they are reviewing. They must understand the typical lead-times to expect so that they do not complain when their work takes time in design, awaiting materials, or scheduling.
Appendix A
Company Profiles

ABBOTT LABORATORIES, NORTH CHICAGO, IL

Abbott Laboratories, founded in the late 1800s, is a major pharmaceutical company with two main sites in the Chicago area. It employs 56,000 people worldwide and has just recorded excellent 5-year earnings. The two Chicago locations comprise about 9 million square feet, split between administrative and laboratory space. All of the space is company owned except for about 5 percent, which is leased space used as swing space. We met with the company’s Plant Engineering Operations Division, which has a staff of 776 people and is supported by several facilities management contractors. Unlike the company’s other support functions, the division is regarded as a profit center because it operates under a chargeback system.

CB RICHARD ELLIS FACILITIES MANAGEMENT, INC., ATLANTA, GA

The business of CB Richard Ellis Facilities Management, Inc., is managing facilities for their owners. The firm manages more than 300 million square feet in the United States and another 420 million worldwide—primarily office, warehouse, retail, and production space. In the United States, the company’s business is divided into eight regions. We met with the national Facilities Management Division, one of five divisions at company headquarters.

IBM CORPORATION, YORKTOWN HEIGHTS, NY

IBM has 128 million square feet worldwide. About 52 percent of it is office space, another 31 percent is manufacturing, and the remainder is miscellaneous. It owns about 56 percent of its space and leases the rest. For this study, we met with IBM’s Real Estate and Site Operations Division.

LOCKHEED MARTIN CORPORATION, ELECTRONICS & MISSILES, ORLANDO, FL

Lockheed Martin Corporation occupies 2,169,000 square feet, of which all but 60,700 square feet is owned. The 65 buildings range from offices and laboratories to factories and warehouses. We met with the company’s Facilities Services Operations and Space Management Divisions.
MCI Telecommunications Corporation, Arlington, VA

About 68 percent of MCI's space is leased. The company occupies 13.0 million square feet of administrative space and about 4.9 million square feet of technical space. We interviewed MCI's National Construction Management Group, which has a staff of 16.

Raytheon Systems Company, Naval and Maritime Systems, Mukilteo, WA

Raytheon Systems Company's Mukilteo operation occupies about 356,000 square feet of office, manufacturing, and laboratory space. It leases another 15,000 square feet of warehouse space. The company's Facilities Operations staff numbers 61, including the skilled trades.
Appendix B
LMI's Best Practices Survey

INTRODUCTION

This is a survey that is designed to be used in a person-to-person interview situation. However, we thought it would be best to provide an advance copy to you before our arrival so that you have an opportunity to review the questions we will be asking. The survey is long and our time together short. We realize that it may not be practical for you to address all of the topic areas (although we would certainly like to cover as much as possible). Consequently, please review the survey and decide which areas you would prefer to address and let us know on the day that we meet. Prior to our meeting, feel free to pull any data or information together that might help facilitate answering the questions. We greatly appreciate your assisting us with this independent research and development effort. If you have any questions on the survey or our meeting time please do not hesitate to contact John Selman of LMI at (703) 917-7113, or by e-mail at jselman@lmi.org. We look forward to meeting with you.

GENERAL

1. So that we can better understand your facilities focus, can you tell us what types of facilities you have in your inventory, how many of each, and what is the total gross square footage?

2. Can you provide an organizational chart for your organization?

3. How much of your space is leased and how much owned?

4. Does each echelon in your organization (e.g., HQ, region, and field location) have its own FM function? What is each responsible for and how do they interface?
5. Has your organization been recognized for taking advantage of any best practices associated with the facilities function?

PROJECT PLANNING

1. Do you have a formal, written Facility Management Plan? How many years does it include? Does it include major M&R work as well as new construction and leases?

2. Is your Facility Management Plan structured to support your organization’s Master or Business Plan?

3. Do you go through strategic planning exercises to prioritize your project planning efforts?

4. What kind of decision-making process do you go through before initiating a project (e.g., ROI, market share, space needs)?

5. Do you have a quality program in place? If so, who manages it? Can you outline the program?

6. Do you have a mechanism for incorporating customer feedback into your planning process?
7. With regard to decision-making, what information do you use when deciding to lease or build?

**OPERATIONS & MAINTENANCE**

1. What measures do you use for operations & maintenance? Cost per square foot? Others?

2. Do you operate under a chargeback system or revolving fund?

3. How do your employees track their time (e.g., time cards)? Can they track time against a specific building/project?

4. Do you find that the age of a facility is related to higher or lower O&M costs? Can you provide some examples?

5. Does your organization have a centralized MIS that allows you to track costs, etc., for every facility?

6. Do you have core competencies identified in the O&M function?

7. What functions have you contracted out? How do you make outsourcing decisions?
8. When choosing a vendor, do you have a method for evaluating their performance?

9. Is the O&M function integrated into a specific business unit or treated as a separate overhead function?

10. What type of maintenance contracting vehicles do you use (FFP, CPAF, other) and how often do you compete contracts? What are your key selection criteria (cost, value, both)?

11. How are maintenance service levels specified? Can you identify a typical service level for a typical facility? What is the $/gsf associated with this service?

12. What is your optimal maintenance-staffing ratio or metric? What is the actual?

13. Do you use CAFM as part of your facility maintenance and management process? What are the benefits of using CAFM? Do you allow your customers to have read-only access to your CAFM?

14. What is the typical service level provided for the cleaning of a facility? What is your average $/gsf associated with this level of service?
15. Do you have facilities that require security? Armed or unarmed? In-house or contracted? What metrics do you use to measure the performance or cost effectiveness of the security function?

16. What kinds of utilities cost control and/or conservation practices have you employed during the past several years? Which ones have made a big impact?

17. What is the typical O&M $/gsf cost for office space? Warehouses? Laboratories?

**DESIGN & CONSTRUCTION**

1. How do you establish your annual budget for major repairs? That is, do you budget a certain percentage annually? (Or, do you fix when broken? Perform ROI calculations?)

2. Do you maintain a fairly static new construction budget, or do you experience significant variations in construction activity?

3. What is the procedure for performing ROI calculations?

4. What proportion of your design do you do in house and what by AE contract?

5. What approval authorities does each of your management echelons have?
6. Do you chargeback for construction and alteration projects?

7. Do you employ Value Engineering on your design and construction contracts?

8. What metrics do you use to track quality, cost, and schedule during the design and construction process?

9. What tools do you use to track quality, cost, and schedule?

10. Within your organization, are space standards strict and uniform, are there standard configurations?

11. How do you approach your outsourcing of design and construction?

12. Do you use any outside benchmark indices to compare cost and schedule performance? If so, which ones do you use?

13. How timely are your communications about project performance? What mechanism do you use to communicate such information to customers?
14. What measures do you use for design and construction (actual/budgeted costs, actual/scheduled time, and number of projects per design and construction employee, dollar amount per design and construction employee, vendor report cards)?

**ASSET MANAGEMENT**

1. Do you outsource functions and services related to asset management?

2. What kind of short-term asset management strategies do you employ?

3. What kind of long-term asset management strategies do you employ?

4. Do you use bar coding or other asset management technology?

5. Do you link your automated asset management with your CADD?

**ENVIRONMENTAL MANAGEMENT**

1. What actions do you take to minimize adverse environmental impact? Waste generation? Safe disposal of residual wastes?

2. What actions do you take to maximize environmental safety and health?
LEASING

1. Do operating units negotiate leases or is this function centralized?

2. If the function is centralized, do you have a system for charging back to the end user?

3. If you have a chargeback system, how do you fund the cost of the centralized leasing function? Overhead? Direct charge to end-users? How is the charge calculated?
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   Benchmark data have been instrumental in helping several defense and civil agency organizations establish performance baselines, identify gaps, and work more effectively and efficiently—and less expensively. They serve a larger goal in helping public-sector organizations discover the possibilities outside their own walls and, ultimately, make more efficient use of our taxpayer dollars. While the Logistics Management Institute’s benchmark database has served as a cornerstone in helping to initiate change, data and metrics go only so far in implementing better ways of doing business. They serve as indicators of where additional analysis is needed to explain why costs are out of line with typical costs of similar organizations. Sometimes, the explanations lie in special government needs, regulations, or special environments, but often they lie in processes, management concepts, and even corporate cultures. This report therefore identifies common factors that lie behind the low benchmarked costs of excellent companies. To address this issue has meant turning from metrics to processes to provide insight into achieving best-in-class performance. The report focuses on the processes that will benefit organizations that are looking to make fundamental facility management improvements in the coming years.

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