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by

General Motors, 1986-1993
The Case of Activity Based Costing Implementation at
Cost Management System Changes:
A Framework for Assessing
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Robin Cooper, William Lazonik, James Rouse, and Mark Young and Charles McIgil, Robert Cooper, William Lazonik, James Rouse, and Mark Young
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ABSTRACT

The Case of Activity-Based Costing Implementation at General Motors, 1986-1993

A Framework for Assessing Cost Management System Changes:
The paper makes three contributions to the management accounting literature. First, this study that are influenced by socio-economic factors.

The paper that emerges is one of an evolutionary sequence of implementation stages: direct observation, and the primary method of analysis is within-case comparison of data sources. The influence of ABC implementation success. Data sources include: personal interviews, archival records, and information technology and organizational change literatures, as well as anecdotal evidence of factors that multiple perspectives. The search for factors that influence the ABC implementation success is guided by the General Motors Corporation (GM) that spans an extended time period (1986-1993) and includes a General Motors Corporation (GM) study designed to study ABC implementation that influence implementation success. The research design is a single case study of ABC implementation and hypotheses about factors study research to develop a framework for assessing ABC implementation and hypotheses about factors management systems. Here has been little research on the implementation process. This study uses case evidence suggests that behavioral factors are critical to successful implementation of new cost research related to new manufacturing techniques. Young and Soh (1961) note that, although anecdotal organizational impact of management accounting innovations. In their review of management accounting research related to new manufacturing techniques, Cooper and Kaplan (1992a) discuss the need for management accounting information.

The adoption of ABC provides researchers an opportunity to study the technical and decision to management cost (Cooper and Kaplan 1992a).

Control through supplier management; assessing customer profitability; and linking product design management systems promote decisions that are consistent with lean production, such as reducing inventories. Activity-based management (Shank and Goodman 1989) by highlighting activities that cause costs. Fundamental building blocks of the value chain, create a new, strategic role for accountants. The basis of resource usage. The inclusion of product and activity costs, which activities are the two-stage method that attributes costs first to production and business activities, and then to products on manufacturing methods. ABC addresses inadequacies of traditional job-based cost systems by using a method of activity-based costing (ABC).

Johnson and Kaplan 1987; Duberly 1990, 1992; Namin et al. 1992; Activity based costing (ABC).

Support decision-making in these environments (Kaplan 1983, 1984, 1985; Miller and Volmann 1985).

The adoption of lean manufacturing methods has created a need for new accounting methods to

INTRODUCTION
Research Method

The paper is organized into five sections. The first section describes the research method including purposes of the study. The second section analyzes evidence from the case discussion. The third section discusses barriers and influence of ABC implementation using ABC implementation at GM. The fourth section describes a model of ABC implementation using ABC implementation at GM. The fifth section presents a summarized case description of the ABC implementation at GM. The last section presents a summary of the ABC implementation at GM. The paper concludes with a summary of the findings and a brief discussion of directions for future research.
with ABC (Pare 1993) and have permitted researchers to study their ABC projects in the past (Cooper and Kaplan 1992). The strategic management of activity-based management (ABM) and manufacturing have spoken publicly about the objective of replacing traditional costing practices with activity-based costing is now the largest most vertically integrated firms. Finally, manufacturers of U.S. demands and vendors is high in the auto industry and influencing product costs (DeLorenzo et al. 1993) and have adopted lean methods of manufacture in recent years. Diversity of products, processes, customer manufacturability was concerned in reference to the Japanese automobile industry; however U.S. manufacturers taken together, these considerations point to the U.S. automobile industry. Theorem can the strategic manner of activity-based management (ABM) expect firms that adopt both can manufacture methods and ABC be more likely to use ABC data in between lean manufacturing methods and accounting systems will reveal labor efficiencies. Thus, we to support different decisions is needed. ABC was developed in response to perceived incongruences information do not speak the same language. Finally, a setting in which ABC data are likely to be used different sites, unclear existing a transition period in which organizational units that previously shared cost organizational dispersion. Limited resources, particularly cause large firms to implement ABM sequentially at integrated firms are more likely to have lengthy implementation processes that cause significant be disrupted if it occurs over a prolonged period and disrupts familiar routines. Large vertically Cooper and Kaplan (1992), Anderson, 1992, Bankier, et al. 1992, Thierry, implementation is more likely to such as those with diverse products, processes, customer demands, or vendors (Foster and Gupton 1990). ABC data are more likely to differ from traditional cost data as in settings with high coordination and control costs, relatively mature. ABC implementations are needed. Second, previous studies have shown that ABC data defined as use of ABC data in the manner intended by the firm prior to implementation, firms with suggest four guidelines in selecting cases. First, to study factors that influence success, where success is non-trivial, and where ABC data are likely to be used to support different management actions --- likely to differ from traditional cost data, where the organizational implications of changing cost systems research --- Factors that influence the success of ABC implementation in settings where ABC data are resource limitations when a Causal-statistical sampling procedures (Eisenhardt 1989). The focus of this Research Site Selection.
Data Definition and Scope

Significantly affects the success of the corporate ABC initiative.

The research proposal submitted to management divided the project into two stages. The first differed from traditional cost data and new measurement methods demanded new cost management methods, and was using ABC data for decision-making, and because it is designed for this one in which ABC data drives the decision to implement ABC. The decision was made to implement ABC implementations and inventory control systems. GM was selected as the site for studying the integration with other accounting and operating systems, including the budgeting system and the requirement of ABC data in 1991. By the end of 1993, 150 ABC models were complete and were still in use that goal. In contrast, GM first implemented an ABC system in 1986 and began their goal of corporate-wide implementation of ABC. The decision had not been made. Exclusive discussions with top managers at Chrysler revealed that, although decision makers agreed to participate, for technical reasons, they were not implementing ABC. In adoption, top managers of the three major U.S. auto companies were conducts in Fall 1992. GM and

and cost management system change, and discussion of ABC implementation experiences are reviewed among various sources. Following this advice, the literature on information technology (IT) implementation and using the external literature to identify potentially important variables (but not to specify relationships (1979) and Eisenhauer (1989, 1996) suggested approaching data collection with a well-defined research focus.

However, a clear signal is missing under consideration and no hypotheses to test (Eisenhauer 1996). However, a clear signal is missing under consideration and no hypotheses to test (Eisenhauer 1996).
In their comprehensive review of empirical studies, Kwon and Zmud (1989) describe the IT implementation literature evolving from a "leaders" model, in which researchers focused on factors that influenced IT implementation success, to a "process" model, in which researchers shifted from a linear to an interactive model of IT implementation that incorporated perceptions of multiple stakeholders. This synthesized evidence from the IT implementation, organizational change, and technology diffusion literature into a model of IT implementation, organizational change, and technology diffusion. They highlight the influence of IT implementation success, to a "process" model, in which researchers shifted from a linear to an interactive model of IT implementation that incorporated perceptions of multiple stakeholders. This synthesized evidence from the IT implementation, organizational change, and technology diffusion literature into a model of IT implementation, organizational change, and technology diffusion. They highlight the influence of IT implementation success, to a "process" model, in which researchers shifted from a linear to an interactive model of IT implementation that incorporated perceptions of multiple stakeholders. This synthesized evidence from the IT implementation, organizational change, and technology diffusion literature into a model of IT implementation, organizational change, and technology diffusion.

Knowledge and decision-making from one political faction to another (Roby 1981; Pfeiffer and Roby 1989) show that organizational ability to absorb potentially disruptive changes can alter the focus on the implementation's success. In this shifting, successful implementation of new systems hinges on systems also requiring technical revision for benefits of the new system to be realized (Ginzberg 1981; Markus androburns 1983; 1984; Looman and Burns 1985; Zmud 1982; Amason 1990; 1994; Burns 1992). More recently, researchers have argued that those decisions are indispensable because they exclude many stakeholders. If the new IT system, decision-making processes that use data from IT implementation, must rethink emerging from the complex interaction of socio-technical factors (TIS and RT).

IT implementation. Earlier studies found that failure was neither technologically nor organizationally familiar work practices, decision-making processes, and power relationships that commonly accompany organizational change. These studies shared a rational view of IT implementation that ignored disruptions to organizational determinants as a function of factors related to the technology and the culture of the organization. Early studies of IT implementation concluded that success was "technologically determined" or "organizational change determinants."
Implementation process and the interactions of contextual factors promote an incomplete, often view contextual factors and too narrowly a time frame. They argue that the failure to comprehend fully the matrix, Kwon and Zmud conclude that early studies in IT implementation specifically concentrated on the organizational, the uncertainty caused by external influence, and external communication networks.

Responsibility: Important environmental factors are heterogeneous of external demands on the success. Important success characteristics include: high uncertainty; high anxiety; and workers autonomy and complementarity experienced by users, as compatibility with existing organizational structures and systems; specialization, and the existence of informal communication networks. Implementation success of functional change: education, job tenure; and role involvement with the IT solution. Organizational factors shown

Important characteristics of individuals associated with implementation include: disposition toward change, ability to communicate, and ability to adapt to change.

Environmental factors:
- the level of the technology is acceptable
- technological factors
- organizational factors

Characteristics of individuals associated with implementation:
- the level of the technology is acceptable
- technological factors
- organizational factors

Factors that influence successful transitions between stages of implementation:
- Kwon and Zmud's hierarchical survey identifies the major contextual factors, each composed of
categories: effectiveness and is seamlessly integrated with other organizational systems (Cooper and Zmud, 1990).

Implementation is defined as the process of changing an organization or system to incorporate new technology. Implementation is viewed as a part of normal activities. Information systems applications are defined by the new system, the IT application becomes a part of normal maintenance that the new technology requires to be sustained. Adoption is measured by the complete need of system shortcomings are identified. Acceptance refers to the minimal level of use and to invest resources to achieve change. Adoption encourages the selection or a proposed solution and the decision.
Factors in ABC Implementation: Lessons from Practice

Having attained management support, assigning responsibility and communicating goals for the system,
factors in achieving each stage are: providing intrinsic and extrinsic motivation to use the system and,
integration of the system with information and reward systems becomes critical for success. Intrinsic
establishing goals for the new system. In later stages, using the system for decision-making and
in stages. In early stages, success is influenced by adequately demonstrating existence of a problem and
To summarize, the hierarchical hierarchy on cost management systems suggests that change occurs
integration as a critical factor in ABC implementation
between cost management and traditional accounting systems; thus, implementing designating systems pass through four evolutionary stages. He defined each stage relative to the degree of integration
stages: (1991) deal especially with the issue of implementation stages, highlighting that new cost management
that influence system usage. Implicitly suggests two stages of levels of implementation impacts. Kaplan
inadequacy of existing systems. These studies, which include factors related to systems design and factors
importance of persuading all parties involved in identifying a new cost system investment in the
using the new cost system to promote its adoption. Strokes and Lawrence (1989) identified the
for reorienting cost reduction. Shields and Young (1981) discussed the need to evaluate performance
championing, good communication, effective timely cost information, employee involvement, and a system
(1987) claimed that change requires long and short-term objectives. An informal organization of
researchers began to discuss organizational implementation of changing cost management systems. Results
soon after critics identified existing systems as barriers to adopting lean manufacturing methods.
Factors in Cost Management System Change

ABC data and integration with other control systems.

As a result of this realization, the scope of ABC implementations should go beyond early stages of system design to include use of
slices of implementation. An important lesson from the IT literature is that any research should be open
consideration in developing a theory of ABC implementation and suggest conditions concerning them relative to
inconsistencies theorists of IT implementation. The IT implementation literature offers several variables for
A more fundamental cause of the delays in taking action may have been inadequate technical settings in which ABC data are used.

complication. The root cause of system diuse was a failure by system designers to recognize the socio-
al (1992) examined ABC implementation failures--where failure was incurred by lack of use. In other
maximization. A new stream of research emerged that linked ABC to organizational change. Cooper et

dramatically different product costs were not efficiently managed. Management behavior consistently with profit
Lauch. Researchers began to respond to evidence that well-designed ABC systems had revealed

how to deal with ABC challenges of implementation--designing a model to produce ABC product costs.

technical reasons may diverge from individual rationality. Discussions focused on what were believed

hierarchy; the ABC literature did not recognize that ABC systems exist in social settings in which
how failure of the ABC system to be widely used was attributed to misunderstanding. Like the early IT

Shilling's words echo earlier writings in the IT literature (Czitrom 1981, Markus 1984) and highlight

Rational process of educating managers about ABC and developing an ABC model. Bevan and

ABC costs, and managerial support was to be obtained through training. Implementation was seen as a

technical: defining the scope of the model, identifying activities, selecting cost drivers, and analyzing

In sum, in the early 1990s the challenges of implementing ABC were believed to be primarily

information:

...ii is difficult for those not directly involved in the ABC project to understand what the ABC

decision-relevance and design simplicity in promoting system use:

incorporate consistent with using ABC data. Bevan and Shilling (1993) also cited managerial

system control and project "champion", top management support, and performance measures and

Precision Behavioral factors included: a multi-disciplinary design team; adequate ABC training; an ABC

accounting systems; and a defined ABC model scope with clearly stated requirements for product cost

economies of the business; early resolution of the degree to which ABC would be integrated with other


Introduction Success (Bevan and Shilling 1990; Cooper 1990a; Ettire and Caudill 1992; Ettire and

use began to appear in practitioner journals. Technical and behavioral factors were implicated in
Ten corporate and division-level salaried employees were interviewed in over 40 hours of taped

Group meetings.

and August of 1993, in September 1993, the author was permitted to observe a corporate ABC user's

training materials, were gathered in May 1993. Interviews with managers were conducted between March

archival records, including significant memoranda, minutes of meetings, policy handbooks and ABC

These types of data are gathered: archival records, interview data, and direct observations.

Data Sources

[Insert Table 1 here]

Implementation to compare the influence of each factor over time.

Influence is shared; one factor is explored using Kwon and Zmud's six stages of

variables that are likely candidates for influence in a theory of ABC implementation. The possibility that

management systems change simultaneously and from anecdotal evidence from ABC implementations of

Implementation Table 1 is a compilation from the literature ABC implementation studies, evolved from a "lecture" model to a "process" model of ABC

With hindsight, it appears that, like the literature before it, the cost management system

Summary

stakeholders' concerns are addressed.

decisively to block implementation. Implementation of ABC systems is unlikely to succeed until these

political landscape by creating circumstances ofATESSEn condition that exist in these managers who respond

increased product cost accuracy, ABC data are not universally protected because ABC data change the

alternative explanation, Arifz and Kaplan (1994) and Shields and Young (1989) argue that in spite of

system costs and benefits and communication barriers between designers and users. Offering an

Implementation barriers were attributed to poor ABC designs, inadequate management awareness of ABC

traditional cost data and their regional agents would prefer ABC data if they were available at reasonable cost.

Early discussion of ABC implementation assumed that data from ABC was universally superior to

a consequence of the expectations of the project. The largest was the position of group whose decisions were expected to change as
simple memory lapses, were identified for further investigation. In these cases follow-up interviews were
identities confirmed and where exceptions of events, Lusinyanti's interpretations were later modified to reflect
the transcripts were superimposed on one another, and overlapping descriptions were compared to
involve rethinking the interview transcripts to create a chronological account of ABC implementation.
This research adapted three methods of data analysis recommended by Eisinger (1989) to

Methods of Data Analysis

[Insert Table 2 here]

Functional areas, and from different production settings',
period and provides perspectives from different levels in the corporate hierarchy, from different
becoming involved with ABC implementation. In some, the interviews' experience spans the entire year
maintaining settings: form workers in functional areas other than accounting and finance before
or divisional ABC position. All of the interviewees have extensive first-hand experience in diverse
employees participated in implementing ABC in at least one plant location before moving to a corporate
1993. Although this paper is focused on the development of ABC at a corporate initiative, six of the ten
perspectives on the period. Table 2 is a profile of each interviewee's involvement with ABC from 1986 to
1996-1993; however, at least three and as many as seven of the interviewees provided overlapping
promotions and re-assumptions include each employee from discussing the entire period from
promotions that preceded adoption of ABC.

their opposition. Opposition viewpoints were discussed with interviewees and documented in the minutes
those who opposed ABC could be easily identified, and if identified, their views would be candid about
research is retrospective, taking place after ABC was adopted as a corporate policy, it is unlikely that
who opposed the implementation of ABC are likely to be under-represented in this study. Because this
responsibility for implementation to the corporate ABC adoption process as a result, views of those
the researcher. Interviewees were identified based on their contact with the corporate interviewee and
informal basis for each interviewee and the company assigned to conducting between the interviewees and

insights into external communications with other firms. A master set of interview questions was the
interviews’. Interview data from a separate study of Chrysler’s ABC implementation are used to provide
environment characterized by large fixed costs and fluctuating demand. They were born of crisis and
mean to help managers measure performance of discrete, decentralized operating divisions in an
volume were translated into per unit terms, based on direct productivity labor. Financial controls were
by divisional management and determining product costs. Indirect manufacturing expenses at standard
capacity, formed the basis for gauging operating efficiency, distinguishing costs which were controllable
volume, defined as the estimated rate of operations at the normal or average annual utilization of
standard volume because the foundation of the financial control system ( Sloan 1963, 164-9) Standard
of GM's management accounting practices date to 1925, when Donaldson Brown's concept of

**CASE DESCRIPTION: ABC IMPLEMENTATION AT GENERAL MOTORS CORPORATION**

success was re-examined by implementation stage to determine whether this explained conflicting results
period to which it referred. Evidence on the relationship between major factors and implementation
second stage of analysis: each term of activity's revenue was adjusted with respect to the approximation
transition points in ABC implementation. Then, using categorized invoices and actual data from the
emerge as influential at each stage. Kwon and Zhang's six stages of implementation were used to determine
well described by "stages" in which factors affect each stage differently or in which different factors
and provided a perspective on the general face of implementation
analysis, and although no new success factors emerge, the results corroborated several important factors
factors that led to slow ABC implementation. Activity scores were also reviewed at this stage of
the "knots of suspicion", the transcriptions were reviewed again with the objective of identifying multi-faceted
references to influential leaders in the ABC implementation effort were categorized under "industrial"
around major factors suspected to influence ABC implementation success (Table 1). Thus, for example,

The second method of analysis required discovering and recognizing the original transcriptions

description from this stage of analysis.

ABC Implementation Process. The next section presents an abridged version of the composite case
of technology and provides an abridged version of critical issues and their resolution during the
continued to more fully explore conflicting viewpoints. Activity records were used to corroborate over

outsourcing mandates. The radical shift of fortune brought about by transfer press technology in
support resources. Plans that were not marginalized were integrated with close and rapid alliance
substantially different cost structures with high capital costs and increased consumption of indirect
of GM's internal stamping facilities. Plans that received these investments were assumed a furrow but raced
be established.

incremental solution and because it was "these," providing no guidance about how the "weights" were to
Company Report were implemented; perhaps because a one manager described it was viewed as an
impossible task of developing a universal cost system. There is no evidence that recommendations of the
because the team was overwhelmed by the diversity of costing practices they discovered and the
recombinant product costing model with a shadow recommendation to assign the labor-based system
report process complicated. A member of the study team recalled that when stated as a bold initiative to
Comptroller's Office. The report recommended eliminating labor-based burden rates with "weights" to
In 1984 a study of costing processes called the Company Report was launched by the
whether this was an adequate solution to the fundamental problem of determining component costs
robust investments in capital and indirect labor-intensive processes caused managers to question
production complex. By the 1980s, press to outsource component manufacturing, coupled with
(NVQ) recall, "we went from one or two burden centers to ... as many as 1,200 centers in one
number of "burden centers" in plants. The Director of Product Cost for North American Operations
the dwindling direct labor base in diverse processing environments were addressed by increasing the

During the 1970s, distortions in product costs caused by allocating manufacturing overhead over

Initiation

Policy using Kwon and Zumdahl's (1987) six implementation stages as an organizing framework
weights brought in to ensure that crises did not recur. However, no approach multiplexed every

"..."
plans to develop ABC models:

(ABC product costs were not yet available). One team member recalled the strategy of continuous testing.

Chrysler-Plymouth Canada (CPC) was one of four groups comprising GM North America's core plant.

Although ABC started as a local initiative, the team at Plymouth was unique among those

very positive. There was a sense that data wasn't available and would be very useful.

was implemented at GM plants that were less concerned about product cost. Managers' response was

conception of cost "activities," rather than products, and had program offices liaise when ABC
categories into the columns and different operational steps for each component's cost to products. The ABC model was the first

cleaned. They sorted the pre-segment information into different categories on the floor and different resource

to this task force spent the first half of 1987 gathering with managers throughout the corporation about the

Researchers at GM were developing an economic model for analyzing transaction costs

close relationship between the numerical cost of a plant or department and the number of

A third plant, at Plymouth, Michigan, had not received a transfer price and was therefore not

change in metal-stamping prices and a fourth originated at GM Research (CWR) that was applied to metal

In early 1987, five separate, uncoordinated cost experiments were underway: three originated

summarized plan components to launch experiments in product cost. Although cost experiments

in conjunction with the acknowledgment by corporate accounting of a product costing problem.
production experience for their ABC Design Team. CPC's ABC Liaison Group would train the team and
learn the new system design. Each implementation site was to designate three employees who
would be managed by Pouline’s Controller and would include a member from the Pouline
slamming plans and seven unique plans. The team also proposed formation of a CPC ABC Liaison
sometime decision... and proposed a three year schedule for implementing ABC at CPC. Six remaining
product costs, product design support, and an understanding of the cost of complexity were important
decision-making tools that would not be disrupted by CPC's existing financial systems but would provide
realistic cost estimates. An implementation proposal was reviewed by the project's objectives--a stand-alone
controller and to help the Director of Finance CPC in a presentation entitled: "CPC Group
experiments. On August 1987, the team from Pouline was invited to present their results to CPC's
product costing methods; however, Group accounting departments kept their work within the hied
The 1984 Report marked the end of formal Corporation and Group inquiry into new
experiments were evaluated at the corporate level
that was knowledgeable about ABC and needed ABC data was to prove invaluable when all of the cost
second major production area. This party linkage to an external (to the accounting function) consultant
researchers joined the ABC design team at Pouline in Fall 1987, to develop an ABC model for the plant's
CPC's policy of routine restructuring into production departments had exposed some of practical problems, the
CGRM's format of routine restructuring into production departments had exposed some of practical problems, the
Pouline experiment broke out of the ecological "chain of accounts" framework and was most similar

As a result of widespread promotion of the Pouline experiment, the CGRM researchers multiplied
Pouline’s plan controller also published ABC in CPC's management and conspicuous areas.
learn and with their technical support began experimenting with ABC. Moving beyond financial cycles,
including two ACG (Automotive Components Group) plans and an engine plant in Pouline, connected the
Two slamming plans were persuaded to try the approach. At the same time, plans from different groups,
part of the team leader's job was responsible to begni for information...
Despite their permission, the team remained to poetry when they were joined by the GMR.

August 1987 meeting: The director was suspicions and replaced the team.

When questioned about the seeming disparity between the promise of ABC that emerged from the team members from Promise Remembered, he reprinted the outcome of the meeting differently:

CPC product cost group:

"The Director of Finance [asked me] how I would take this group under the C.P.C. (Comprehensive Product Costing) program. The ABC model was not the program we were supposed to continue with. It was the measurement system and not the measures that were questioned. The measurement system was widely questioned and the formula that was used to calculate the cost of the production line was questioned."

The Director of Product Cost, for CPC recalled the meeting:

"The resources required to implement and maintain the system were another big sticking point. It was driven by each driver, and when the driver would be killed we started churning out cost drivers. We knew that 78 cost drivers were too many, but the model was too complex. The people hadn't heard of ABC and didn't understand what the implications of changing the cost figures meant."

She also remembered concerns that were raised in the meeting:

- Develop machining systems: how were processes to be approached?
- Oversee implementation: a product team member remembered preparing for the meeting.

No original ABC team members departed and Project Headship moved to the remaining original team researchers to complete ABC implementation in the plant’s second major production area. The concerns of the GMR...
considered product. It was an interesting study and showed tremendous effort by a few people.

...By then the [recorded-piece time] approach was gaining traction on a shelf. I don't think it was CPC Product Cost recall.

cost experiments on the executive of the corporate cost system was sharply limited. As the Director of Theory had support at the top of the CPC organization. What can be concluded is that the influence of other

ABC adoption. The team was physically isolated and had no authority to explain ABC's scope. Although

In sum, it would be premature to call formation of the two-person CPC ABC group a signal of

information to project future product data. He was not liking to outset a loop-

His vision was an integrated system that would accurately define the cost of a vehicle and enable

Corporate level. As one person remembered:

the impetus for moving the discussion of cost system innovations from the plans and groups to the

interviewed the support of CPC's Director of Finance from 1987 until his retirement in late 1992. It

is easy to say that there was not CPC group-level support for the effort. On the contrary, every person

The ABC sponsor was not authorized to hire additional ABC designers as he deemed proposed. This is not

interested and we were there to support them if they were willing to commit resources to it.

there was no critical mandate to implement ABC plans called on if they were

...will and scope... CPC management was still asking "What benchmarks are we actually going to get

adoption, the ABC team leader described the atmosphere as:

Although creation of a CPC group-level ABC team suggests a juncture between initiation and

ABC design support, ABC training, and "user" support.

Design an annual documentation ABC implementation steps, and defined their jobs to include providing

Group, They continued to provide technical support to plans. CPC is evolving with ABC, developed a

manage the transition from implementation to maintenance (provided by Pontiac's existing accounting

Although they were officially CPC employees, they remained in Pontiac to complete the ABC model and

more effective processing.

System for CPC, and the Pontiac Process Model and Engineering Operations will be lead plans for this

Program's completion is going to lead to the development and implementation of the ABC

Product cost group. The March 1988, transfer announcement stated:

Discussion were released of their plans responsibilities and assigned to lead the ABC effort from CPC's

Predicted, seven months later these two people (hired under referred to as the CPC ABC sponsor and
Adoption

Adoption of the adoption process

The objective of conducting a feasibility study of ABC suggests the close of the information stage and the

Thus, 'information' is characterized as a broad search for solutions when the formulation of the CSMC with

workshop's cost item was to evaluate this possibility.

receive a recognition that ABC had potential as a corporate-wide system. The CSMC

for major projects. It was properly much resented in the minds of top management. Formation of the Council

essentially, it was going to be ABC. In 1984, the decision continued to be an issue in the lower

ABC and only ABC and we were not going to consider machine hours. until the final stage.

The cost part of the CSMC [study] was transmitted as ABC. Meaning that we were going to look

The ABC designer described the significance of the CSMC

the CSMC workshop, the CCM ABC sponsor and the ABC designer were assigned to the cost item of

the CSMC in response and headed by the secretary of the CSMC, a member of the corporate finance staff. One of the

and GMR, and GMR's Assistant Comptroller. The Council was supported by a workshop that was based

maintenance methods. The Council was jointly chaired by three individuals: the top managers of AGC

well as developing a comprehensive performance measurement system to support adopted.

The CSMC was charged with reviewing and recommending changes to existing cost practices as

meeting was the formation in October 1983 of the cost systems and measurement council (CSMC)

CPC's ABC sponsor met with GMR's Vice-President of Finance in early summer and the outcome of the

and expansion. The two researchers who participated in the design implementation, their supervision, and

In response, managers from GMR naturally recommended CPC's ABC approach as a model for corporate

A research group should be formed combining appropriate people from GMR and the central

in their final report that:

and advice for management. In Spring 1988, the SAG was charged with reviewing GMR and concluded

scientists, called the GM Science Advisory Committee (SAC), periodically reviews company practices

As part of GM's commitment to technological innovation, an external panel of world-renown

that we're really starting to ask people for their thinking about where our costs are coming from.

was the first time we saw that not only the discipline, took existing information and a practical

of course, an easy decision. It just wasn't something you would want to do or whatever. "ABC

But it was clear that if you wanted to replicate that you would have to spend the same amount

was the present, we decided not to worry about the concerns mentioned above. Instead, we should

was the first time we saw that not only the discipline, took existing information and a practical

of course, an easy decision. It just wasn't something you would want to do or whatever. "ABC

But it was clear that if you wanted to replicate that you would have to spend the same amount

considerably less than universally true that they elegantly supported looking at decision support...

...we asked them why they were doing ABC and how they wanted to use it. I think it was

your plans... things that the ABC pilot could help support?... we need to identify a major match

We presented the list to the plans and said, "Which of these make sense?... Are these hot issues in

...initial studies focused on differences between traditional product costs and ABC product costs.

loss of system usefulness

The next step was linking the sites to ABC pilot study. Seven agreed to participate and one unsolicited volunteer emerged. Bringing the pilot to the following month, the cost team approached the eleven plans identified for the expanded

The Council approved the plan asking for a complete calculation of ABC by February, 1990.

In the following months, the ABC team focused on developing cost data in management decision-

...developing case studies from all 22 sites that would focus on uses for ABC data in management decision-

...team proposed in the April, 1992, CSMC meeting to implement ABC at eleven additional sites and to

...traditional product costs to provide examples of uses of ABC data. To address these issues the
decision... Although the Ponneque pilot study demonstrated that ABC product costs were different from

ABC to coordinate strategies for improved performance and show that ABC data provided better

instituting ABC systems, they did not cover the specification of processes. Second, they needed to link

...throughout ABC plans... had identified two prerequisites to ABC becoming a corporate strategy. First, they

The workshop identified two prerequisites to ABC becoming a corporate strategy. First, they

The implementation strategy should address people issues, ensure that new information generated

I should be comprehensive, covering implementation plans for all North American

...level, division level, vehicle level);

...must provide the potential for providing information at different levels of aggregation; e.g., plant

...must support enterprise assessment of alternative product designs.

...corporate strategy. In the February, 1989, CSMC meeting the team was given four guidelines for

The cost team of the CSMC workshop was charged with assessing the feasibility of ABC as a
In February 1990, the cost workshop presented results from the 18 pilot sites to the CSMC.

18 of the pilots would meet the January deadline; 6 by team members from successful implementations. Subsequent monthly CSMC meetings included testimonials from pilot sites.

Formation of plant-level steering committees, support from managers and sponsorship of pilot teams and

with group-level managers and management support for full-line starting of the local AB teams and

requests that the CSMC provide greater visibility to the pilot teams through frequent communications

factors related to management support and communication were critical success factors. The team

believed their participation in the pilot study, the cost workshop observed mixed success in implementation. Believing their learning application of the concepts, or other factors.

Even in the pilot study, the cost workshop observed mixed success in implementation. Believing their learning application of the concepts, or other factors.

In their September 1989 progress report, the cost workshop defined three implementation

benchecks, and reported each site's progress on a Gantt chart. The workshop monitored the plans.

help us improve our costing techniques.

had been studying ABC since 1986, and was piloting it in 19 sites in hopes of "and [the] only if it can

accomplished in Cincinnati. He reported that GM recognized problems in cost accounting practices,

CEO Roger Smith spoke to the National Association of Accountants (now the Institute of Management

Evidence that ABC might become corporate policy came on June 21, 1989, as GM Chairman and

drew that we would present to the Council and use for future training.

ifyou were successful in your market, you then decided to develop a business case using then

classifications, and to focus on action plans and specific implementation steps.

previously conducted by Cooper and Kaplan using Harvard case studies began to incorporate GM

The new members joined the CSMC cost team to assist in training and advising the pilot sites. Training.
ABC models with existing financial systems, and finally, the source of resources for implementing ABC.

ABC models: how to communicate ABC to the larger GCT community, how to integrate and reconcile follow-up schedules; whether ABC should be a corporate or local initiative; which costs should be included in ABC implementation. Other concerns that the group was interested in addressing included: a corporate product cost, to evaluate the potential for developing a common "driver" list to guide future use in two existing plans to identify the degree to which supplier selection of cost drivers influenced on the future of ABC, the Council directed the team to conduct a follow-up study comparing cost drivers identified activities and selecting cost drivers -- in designing ABC systems. Before they would decide:

One concern that Council members raised in the meeting was the role of subjectivity --

in our training programs.

I was the least of an ABC checklist we assessed specific reasons for failure and included them.

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In June 1990, the CSMC cost team presented evidence from the pilot study to the Executive director. A working team of the ABC Steering Committee that was headed by the ABC Sponsoring team of ABC Issues to support the plans. This team would represent the ABC steering committee's views and would have a significant impact on the ABC implementation. The Council, through the ABC Steering Committee, recommended ABC's implementation in May 1990. The cost team proposed an organizational structure for supporting ABC that was accepted by the Council. In the first year, ABC was implemented in the ABC's organization.

April the team proposed a five-year rollout schedule for ABC's implementation. The Council amended this to three years, requesting completion by 1993.

In conclusion, the CSMC endorsed ABC as the recommended approach and directed the team to complete a set of cost systems, and four did not like ABC and would not continue to support it. At the meetings, the group did not like ABC but did not have the resources to support two systems, none intended to continue using ABC. The team did not like ABC but did not have the resources to support two systems because integration across diverse systems would pose too great a problem in the short-run. However, in the long run, all financial systems were to be harmonized with ABC data. Of the 18 pilot projects, a significant number of supporting cost reduction activities in the manner that ABC on which they called the primary benefit of supporting cost reduction activities was the ability to identify the cost drivers. An early indication of mitigation of and concluded that "a list of core cost drivers would be a useful starting point for implementation..."
These presentations motivated discussion on three critical issues that shaped the steering team's agenda:

- GM Power Group (GMG), were presented use for the data. "No plans for implementing ABC in the GMG Group of the newly formed GM Power were reassigned to different jobs and there was no plan to update the model because plant management had no implementation at all of their two slaming plants had not been maintained; local ABC decisions were made in the plant to support cost analysis of the building activities. The truck and bus group reported that the pilot model for ABC and cost drives, for all CPC slamming plans, CPC was also building the first non-plantwide implementing ABC modernization plans, where implementation had been postponed until completion of the CSMC Pilot were.

- CPC's Finance Director reported that their slamming plans were either completed or in progress. The CPC had an aggressive schedule of implementing 41 plans in 1991, 38 in 1992, and 31 in 1993.

- Adaptation

  "transcensions-based costing" management adopted ABC as GM corporate policy. Implementations were not yet at the pilot stage. In 1992, a year after the pilot study of CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plant CPC's implementation was to be completed by 1993, with each group determining a schedule of plan
Finally, the ABC Sponsor was a useless advocate for ABC.

... We were trying to develop the customer-support relationships for information
shared ... building on other shows within other organizations. So we were building awareness and
pressuring [on them] and getting them to endorse ABC. We became part of their missions. We
approached the General Technical Council (an executive-level council) for endorsement.

Technical Council (an executive-level council) for endorsement

The minutes of all committee meetings were circulated to the groups, operating across second level.

To increase ABC's visibility, the Oversight Committee employed these publication vehicles:

Consultative rather than time-incremental

plans: We tried to be experts in addressing system problems and conceptual problems
learn to use the expertise for their implementation. We didn't claim to be experts. Our individual
other means by which we involved them in the process... We tried to build collaborative spin and let the
people understand what the need for change was and how the system could provide better cost
information and how they could use it... We focused on the broad concepts of ABC.

Training evolved from a focus on technological skills to a focus on strategic cost management skills.

Local lessons on ABC design, providing software support, and serving as the hub of ABC communications
Oversight Committee's mission included training local designers, monitoring implementations, advising
The ABC Steering Committee met quarterly and the Oversight Committee met monthly.

... the group that could be satisfied by ABC data to be derived from ABC data. The ABC Sponsor was asked to identify all uses of plant-level data at
their ABC needs to be recognized as a "full system" with top management recognizing cost information
and thus use the information to improve management support systems. Consistent definitions of "tracks" become an item for discussion. Finally, the apparent failure of the Track
not easily reconciled to the ABC System. Thus, integrating ABC with existing financial and operating

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plans should communicate” but the people at the plan were I committed to it. I summarized

in a single corporate control system.

the CPE group

Systems Streeting Committee, a corporate group that was evaluating ways to harmonize diverse systems in

previous concerns about system integration, the Committee decided to seek closer ties to the financial

explain poor utilization of ABC data in cost analyses. On theheels of this report, and in response to

combination of the expanding set of implementations was anecdotal and anecdotal, and this failure may

designed returned to their original jobs after building the ABC model. He recognized wether central

of severe resource constraints in the plan, ABC was still viewed as a “special study” and particularly local

remarked that he was concerned about whether completed implementations were being upgrade as a result

place to meet the 1993 deadline. ACG’s Finance Director reported that the Group was moving ahead, but

The March 1991 Streeting Committee meeting was again focused on insuring that plans were in

soldiers internal support for ABC at the corporate level.

Thus GM became known in the business community as a leader in ABC Implementation, a role that

different sourcing and investment decisions... There was importance for people to know

done something different and within any specific we were told that GM was making

decisions on the early initiatives that were coming up and the people really
decided on the early initiatives, that they had. As product cost and strategic planning side came

A/C the meeting... we were able to communicate... most important... that GM appeared to be

walked away... knowing that these guys really have a jump on Chrysler on this one.

ABC at GM had gone much further than I had previously understood... not only had they done

an on-going exchange about ABC implementation. The Chrysler manager recalled their first meeting:

in mid-1990, his counterpart at Chrysler contacted him to discuss ABC in the first of what was to become

and teaching in an executive program at the University of Michigan’s School of Business Administration.

speaking at conferences, representing GM at a Computer Aided Manufacturing--International (CAM-I).

In addition to publishing ABC within GM, the ABC sponsors developed a national reputation by
ABC site. The plans for implementing the second plan were delayed pending resolution of

The Finance Director of Track and Bus announced that ABC would be reviewed at the existing

communicate the cost system.

In the environment, we need to continue the existing systems before we can

reconsider and conventional systems. Every body was lying to understand how ABC would

with other system developments. We were developing common systems. Common accounts

were issues that came up when we tried to resolve from a conglomerate standpoint (was?) integration

costs. An Oversight Team member recalled:

traditional product costing but which were not reflected in the ABC system (c.g., C-grade

with budgeted production volumes; and, distinguishing costs that were included in the budget and in

traditional concepts of fixed and variable costs in the ABC model; recognizing actual production volumes

is 1992 budget based on ABC data where it was available. The biggest challenges were: linking the

ABC from the stand of special study into an integral part of the financial control system by developing

meeting. CFC was taken as the first step to reconcile ABC data with traditional financial systems and move

The director of CFC Finance reported a second innovation at the March Steering Committee

director product costs to represent a misapplication of ABC design principles.

received each model and negotiated with local teams numbers. But their design choices were believed to

ultimately, the plans differ in the degree to which they used the common design. The CFC Livon

principles. If the information was reliable, people were more willing to change.

specify. If the information was reliable, people were more willing to change.

The main criticism of setting up systems was balancing cost with ABC system. It was

not want to give up much... We never tried to communicate our. The steering group on every

ABC model that a ready-made system. These are a lot of committees in many areas, and they did get

should fight for something on our track and planning (an initial effort to get our system

they say, I don't have time. They were going on other options, but I know what they

later improvements in an already prepared report (one pain s experience). So it wasn't, 1 at a time, they

were also discussions about the initial costs for the specific costs to products.

information needs of individual plant managers and the level of detail required to support those

system over time. During the CFC communication meeting, discussions were focusing on the

system differences that arise naturally from having programs that provided entrepreneurial spirit and

An Oversight Committee member described the communication effort as an attempt to "pull things on

"A lot of the things and the ABC sponsor [I facilitated the discussion.

everyone's non-modernized maintenance plans [initial designs for example, very little allocated

dollars over machine hours... and inherent ways of describing. We called a meeting of
As a result of the endorsement and recommendations of the General Technical Committee,
Passed from CCL 2860 that indicates ABC acceptance:
Passed an ABC data from the plans that implement the ABC system on the plans. Following are
use of ABC. If required, the Steerage Committee offers a transition to use of the cooperative ABC approach to one
of Activity-based Costing. CCLs are policy statements published by the Committee's office and
potentially useful for ABC data. Identified cooperative requirements for the implementation and
maintenance of CCLs at the regional level. CCL 2860, the outcome of the ABC Sponsor's Steering
July 26, 1991, of Committee's Circular Letter (CCL) No. 2860, entitled "Implementation and Utilization
The First Indication of Corporate Acceptance and the Intent to Transition ABC was published on

Acceptance

ABC system; however, Summer 1991 marked a clear transition to corporate acceptance of ABC.
Population of ABC Sites grew and local design teams introduced innovations in the design of use of the
implementation through "committees" as the corporate standard. Adaption continued as the
needs. Those who led the adaption process shared the ABC system that gradually became
While some groups relatively accepted ABC adaption others rapidly adapted it to their

"I can't tell you what it was... it was so much a factor that they did not have the same progress as
my AGRESSIVE! I don't know that it was so much a factor that they didn't have the same progress as
in the ads... and the DC's probably were not

...and the AGRESSIVE was the most AGRESSIVE! But they also had the most non-assembly plans. The AGC had

Committee member said:

"Enthusiasm of the groups in implementing ABC and developing implementation plans, an OCESTAL
highlights significant system and design process adaption. When asked to comment on the relative
implementations with ABC and the groups mixed results in the early stage of ABC adoption. They also

The minutes of the first two meetings of the ABC Steering Committee have at the early
Implementation underway at other sites; the remaining seven sites were implemented after 1991.
Implementation ABC in 1991. The CGL Group Finance Director reported that BOC sampling plans would
workforce-related issues. The BOC Group Finance Director reported that BOC sampling plans would
Liaisons to support new project teams. Previous implementation sites were encouraged to update their
processes at a pace dictated by the ability of the relatively small team of Corporate and Group ABC
In the year following CCL 2860, ABC training sessions were offered quarterly. Implementation
systems and used ABC cost data as an input.

Systems (SCCS), the Illuminated with the design, Inventory valuation, and Production scheduling
emission. The communities developed a modular System, called the "Simplified Common Cost
procedures. The communities support (GM-ID), to study ways to standardize and harmonize existing cost
management and systems support (GM-ID), to study ways to standardize and harmonize existing cost
management systems. The communities, including members from accounting, the ABC group
formed the Common Costing Procedures Committee, including members from accounting, the ABC group.

Although CCL 2860 recommended widespread use of ABC data, G1s, and Computerized Accounting,
the first " kilometre of evidence of corporate support and significant plans to dedicate resources to ABC.

An Overhead Committee member recalled that the latter was well-received by plans because it provided

(Emphasis original)

...pursuing our decision making on the best available cost information.

Product costs versus similar traditional costs are currently utilized. In this way, we will be
In many of ABC, information can be summarized by the reclassification is use. ABC activity at
inability to ABC in the process. This volume and process of those volumes ABC implemented in the
To implement ABC in the process of reclassifications to the level of resources required to
Although ABC is the information base, it is essential to include capital expenditure reports.
will be required to implement the information at the enterprise level to include capital expenditure reports.

...Other functional applications that are required to

maneuvering processes and production impacts. The primary application of these

...ABC product and activity cost information is available at the primary decision support

...one of the primary applications linked to the performance measurement and feedback systems. ABC will also be
with the help of ABC model, ABC implementation will also also be

...ABC will also be utilized as a decision making at the enterprise level to include capital expenditure reports.

...ABC will also be utilized as a decision making at the enterprise level to include capital expenditure reports.

...ABC will not always be the primary decision support systems for controlling special studies. ABC will not always be the primary decision support systems for controlling special studies.

ABC studies in non-manufacturing function are now or will be under way in control of the

The initial focus of existing ABC implementation has been on maximizing overhead costs.

...available in all decision process of activity cost of manufacturing (e.g., cost centers of commercial).

...unforeseen impacts that apply already utilize the ABC model. ABC implementation is required

...the full range of existing ABC implementation has been on maximizing overhead costs.
techniques: discussing software issues, identifying implementation roadblocks, and discussing solutions.

and most of the plans that had implemented ABC. The operation of the meeting included sharing design
developed to cost accountants in the plan.

ABC model from year to year. Multi-disciplinary design teams disbanded and the maintenance task
was relinquished on the part of these managers to common plant resources to update and maintain the
portion of managers' own genuine implementations that ABC was a product cost system. The result
which increased the appeal of ABC at new ABC implementation sites, it was difficult to change the
category such as prevention, appraisal and fairly (in order to support detailed analyses of activity costs.

modified to perform design to classify costs (c.e. value and non-value added) and cost of quality.

information process re-engineering efforts or "activity-based management." The ABC software was
informing process re-engineering efforts or "activity-based management." The ABC software was
popular language of business process improvement. The change began to advertise ABC as a means for

the ABC initiative during late 1992 and 1993. Moving away from the language of product costs, the

sufficient motivation for implementing ABC at some plants, caused the corporate ABC team to re-concept

These factors, in conjunction with growing awareness that improved product costs were not
(product costs or ABC model design strategies) to one another. For several years the company was
was emerging as ABC was becoming a visible player in the high-tech, high-end market.

Lutz, whose background was in manufacturing and restructuring, who also reported a disturbing trend that
pointed out that Chrysler's ABC efforts were being driven by the enthusiasm of their President, Robert

upon communicating ABC to non-manufacturing areas of the company was返乡 when the ABC sponsor

were attempts to reconcile the elimination of non-value-added activities. The potential concern

Electronic representatives reported that they had used ABC data to identify costs of business processes

Holdings and replaced in a Delta plant in January 1992, could be used to meet the deadline. A Delta

process, called "discrete implementation," that was piloted at the end of 1991 in an Australian plant (CM

concerned that the 1993 deadline was unrealistic. He expressed hope that a new, less implementation

ACG expressed frustration at the slow pace of its sites, which had completed only 21 and was

ABC models to reflect 1992 budgeted costs and the minutes of the May 1992 Steering Committee
experimenting with new cost systems were populated by entrepreneurial individuals who championed the
Consistent with the organizational change and IT implementation literatures, the early days of
Individually and ABC Implementation

[Insert Table 3 here]

ABC implementation is well-depicted through a model of stages of evolutionary change
factors from stage to stage, and the emergence of different factors at each stage support the claim that
broader categories that influence ABC implementation (Table 3): Reversal of the offices of particular
GM's ABC implementation, from initiation to acceptance, to identify specific constraints within these
technology employed and the external environment. The following subsections review evidence from
function of these broad factors: the individual's involved, the organization's structure, the loss, the
Kwon and Zinda (1987) model successful implementation at each stage of IT implementation as a

ANALYSIS OF ABC IMPLEMENTATION AT GENERAL MOTORS

Surrounding of the technology was achieved by the close of 1993, where this study concludes
quarter of 1993. Nonetheless, acceptance is defined by the minimal level of use necessary to support
implementation until the least possible moment and was scheduled, that implementation in the last
and 1993. One concern, raised by a Group Liaison, was that some recalculation plans had postponed
addressed of deleted products as necessary---every plan had an ABC model for some period between 1989
implementation, most simply revised the pool of costs to be allocated to correspond to the new year and
accurately maintained and updated---few plans had conducted a full activity analysis since the initial
would be met, within 152 different ABC models in existence. Although the ABC models were not all
By November 1993, it appeared that the deadline for complete ABC implementation in NAO
in implementing ABC. The evidence suggested that all NAO plans would be completed by early 1994.
The substance of the meeting was similar, with each Group Liaison reporting their progress
attendants. The group met again in September 1993 with an even larger
for additional meetings. ABC implementers met isolated at their plants and were encouraged to learn that
100 and their responses to a survey conducted by the NAO ABC group indicated widespread enthusiasm
sharing success stories, and establishing a network of ABC users in GM. The participants numbered over


Workers who lacked formal education. These employees were instrumental in building ABC models that
were used. They were enthusiastic; they were shop-floor
workers who were most likely to be enthusiastic. ABC team members were those with significant process
knowledge. Often, these were engineers in first-line supervision; occasionally, they were shop-floor
employees. The qualitative assessment of the CMSC pilot studies by the CMSC cost team found that individuals
would be persuaded others of the merits of the change.

The conclusion seems to be that a bias for change must be accompanied by a measure of patience and
willfulness to persuade others of the merits of the change.

Another manager had a similar perception:

DC Finance Director [was on the Council and he was pretty adamant that CPC was going to
ABC, many people believed that regardless of the study's outcome the CPC ABC effort would continue.
A consistent challenge to ABC adoption. For example, although the CMSC was charged with evaluting
contribution to formation of a stable resistance movement within the financial accounting ranks that posed
a threat to the CPC's Director of Finance had the positive effect of elevating the issue to the corporate level but
during the process of adoption. However, sponsorship also had a dark side. The missionary zeal attributed
to the importance of entrepreneurial spirit and a bias toward change continued to be important.

Rather than the more typical vertical communications avenues to champion ABC:

... discussed below, as have been outside of the traditional role of a plan controller and those horizontal
consideration as a corporate strategy. However, these efforts also produced negligible side effects.
considering efforts to publicize ABC were critical in elevating the project from a local experiment to
a similar well-positioned. The unique sponsorship by Ponzi's Controller and his
Controller's position in publicizing ABC were critical in elevating the project from a local experiment to
the continuity of the proposed solution to the individual's job, their authority and their responsibility. The
was their ability and desire to drive change. The ability to drive change stems from role involvement---
cause of ABC. These people embraced change; however, perhaps more important than embracing change
Innovation and adaptation were at odds with factors that promoted the unique form the adaptation took. Subsidiary after subsidiary became the norm, powered initially by individual factors that promoted counterproductive models, and expected to show "entrepreneurial spirit" in the process. Not surprisingly, these values collided with later needs to standardize the models for similar production environments. Problems were identified with the first ABC models were refined to use local expertise in developing their own solutions. Desig...
difficult to separate the role of contractization from that of specialization in the failure of the study to
Because the Company Report was conducted by specialists in the accounting and finance areas, it is
for new cost system approaches in the initiation stage.

by Kidder (1981), GMR's experience suggests both positive and negative outcomes of contractization: the search
positive and negative consequences of contractization between parallel decision-making units are well-documented

the broader realm of strategic, cost management strategies for accomplishing goals of the

were the undermining, exacerbation, and exacerbation with different costing approaches by plans that generated

In addition to limiting the range of alternatives, contractization also slowed the search for

to become involved,
issue to one of management decision-making and caused managers outside of traditional financial circles

the attention of top managers, and the early involvement of GMR in ABC, that elevated the

recommendation of an external body of experts, the Science Advisory Committee, that thorough cost

narrow range of solutions that are incremental in nature. Indeed, as discussed below, it was the fortuitous

Company Report is further evidence that contractization's special advantages are more likely to develop a

operations as the greatest source of resistance to ABC at both the plant and corporate levels. The 1984

Several managers cited GMR's strong finance function and its historical independence from

Organizational Structure

the major influence at this stage of implementation

implementation, as the next section discusses, organizational structures supplemented individual factors as

with the II (increased internal networks) will enhance the prospects of moving to the initiation stage of

Measures of ABC implementation facilities formation of internal communication networks between plans

informal support from leading personalities was replaced with an informal network of ABC users.

routines that promote efficiency --- contrasted to the dominant factor explaining acceptance of ABC.

was the first stage in which individual personalities crossed and bureaucracies --- in the positive sense of

In contrast to the first three stages of ABC implementation, the evidence suggests that acceptance
terms of reduced local communition to ABC. Functional specialization in ABC methods appears to have
unique ABC models. Further profit-level analysis is needed to establish the cost of standardization in
original combined strategies to promote ABC model "overhead" at the plan by allowing plans to build
communication process, a unique form of ABC system adaptation, named "communication."

Since its usefulness was never tested,
specialization did not favor ABC adoption. However, it can not be said to negatively influence adoption
specialists who might have addressed concerns relative to systems compatibility. Consequently,

specialized skills. However, the CSMC cost workshops made relatively little use of accounting
to specialization in adoption. Specialization is critically important to speed adoption as a result of ready access
communication to communiction in the form of the cost systems and measurement council (CSMC), continued to

factors will hinder implementation at other companies.
systems alternatives. However, as ABC systems become more widespread, it is unclear whether these
may be modified to improve the search for system alternatives. Both reason behind GM's search for cost
furthermore, if specialists were to develop new systems that were consistent with key
expectations with its "a clear set of guidelines may be required for successful group is unlikely to make
the criteria that the technology being implemented is new, as ABC was at the time that GM began
less to confusion and manipulation, a relationship that might become apparent.
approach the problem with a "clean slate" and then he believed that system changes would require close
and no accounts, a comprehensive, powerful's comprehensive explanation that is cliche
account system's success, second, echoed that the Roniess audit had study included only one financial
overwhelmed by the magnitude of the task in part because of their extensive knowledge of the existing
impacts on the search for cost systems alternatives. First, two managers held their study participants were
produce revolutionary alternatives. Two pieces of evidence suggest that specialization had a negative
Had network communications been stronger, the results of the pilot study might have been weaker.

To use identical cost drivers, experimentation and not just finding out what the other person was doing... we didn't want all the pilots

experimentation where we (could)... see what techniques worked better. We wanted them to be

highly visible so in the operational units, we wanted them to talk to each other so that

would be able to achieve success more readily... on the other hand, we wanted this to be an

knowledgeable and in the operating units, and we wanted them to talk to each other so that

another... we need to coordinate the network ourselves... it's a whole tricky because we were trying

and we need to encourage people to talk with one

CSCW pilot study designed to evaluate ABC. As one cost workshop member recalled:

Horizontal communications between plans also increased corporate adoption of ABC during the


articulation

assessed relative to company norms... norms that are likely to be correlated with organizational

system attributes, the CFC experience suggests that the value of internal communication must be

to implementation progress. Thus rather than being uniformly good for promoting the search for cost

may have contributed to polarization within the finance group that would later emerge as an implementation

enhancement. By enhancing traditionally hierarchical hierarchical communications channels, Promote's

controller position of CFC to "get them [the Promote team] back under control without sacrificing their

Group-level approval and to use traditional communication channels. Planned discussed managerial in the

was what a CFC manager referred to as the team's "lock of discipline". Lack of discipline, "lock of discipline"

plans as critical to overcoming resistance of the central financial group. The flip side of this enthusiasm

controller unimpressed by pursuing a strategy of publishing results of the Promote experiment to other

strategy. Several of those interviewed identified the power of grassroot involvement that Promote's

processes or plans in the production sequence were critical in introducing ABC as a viable corporate

flows. However, informal horizontal communications networks... those used by plans with similar

articulation and functional specialization is often accompanied by vertical communication

that further analysis of ABC implementation at the plan level is necessary:

specialization promotes innovation in system design and usage at the plan level... yet another indication

plans, where multi-disciplinary design teams were the norm. Thus it is less clear that functional

implementation process. However, most ABC systems adaptions were a response to uses of ABC data in

attention on implementation issues, the resolution of which often generated adaptations to the ABC

promoted adaption of A dedicated ABC Steering Committee and Oversight Committee focused corporate
about system complexity, suggests that even during the early search for solutions, the mental calculus of similarities, the promise team member’s notions of “trial operations” being raised, including concerns that solutions were being evaluated relative to the development of the existing labor-based system. Moreover, this concern then the prior study identified “discriminating differences” in product costs suggested complexity was an important screening mechanism for identifying viable cost system alternatives viewed as a pragmatic balance between using existing information and inputs from experts, indicators that searched for new cost system approaches. The statement by C.P.C’s Director of Product Cost, that ABC was the relative improvement over the existing cost system, very from the beginning critical elements in the technological factors—complexity of use, compatibility with existing accounting systems and

Technology and ABC Implementation

management practices.

Committee and the resultant integrated cost approach refocus an attempt to standardize diverse cost increased frequency to support rapid roll out of ABC. Finally, formation of the Common Cost System’s maintenance support, and “sweatless sessions” for top managers were standardized and directed with and adopted as an efficient means for implementing ABC. Training programs for implementors, typical implementation process to accommodate exceptional circumstances and was quickly called the “flex” implementation started as an adaptation of the transmission corporate policy statements. The “flex” implementation started as an adaptation of the communication vehicle that was widely recognized and had strong internal legitimacy as a channel for individual influence as the major force influencing ABC implementation. CCL 2860 was a routine

helped identify innovation and propagate adoption. Completely supported but not centrally governed, and completely modeled communications, appears to have

they reduced adaptation of ABC at plans in show, the combination of local design initiatives, that were plans rather than stimulating how ABC models were to be built and maintained, it does not appear that networks focused on broad support of local ABC teams and spreading news of ABC innovations to all committees and the use of group illusions facilitated vertical internal communication. Because these

During the adaptation stage the organizational structure of the ABC overseas and steering

Implementing ABC adoption.
The focus of ABC from product costing to process or activity costing. This need for change in the acceptance period was the need to shift the focus of ABC from product costing to process or activity costing. This need for change in the acceptance period was the need to shift the focus of ABC from product costing to process or activity costing.

The most significant technical aspect of ABC during the acceptance period was the need to shift the focus of the representation accuracy of their models.

Corporate policy: Not surprisingly, communication met resistance from some ABC designers who were not motivated by the need to move ABC from its status as a “special study” to becoming standard cost systems in all large companies or institutions. The drive to commercialize ABC systems was important in determining the direction of their development. The drive to commercialize ABC systems was important in determining the direction of their development. The drive to commercialize ABC systems was important in determining the direction of their development.

During the adaptation stage, corporate demands for communication across plans and for an examination of the effectiveness of ABC data in several decision-making settings emerged as a new criterion against which to assess ABC in the CSCM pilot. The pilot study was designed to evaluate the effectiveness of ABC data in the decision-making process. The pilot study was designed to evaluate the effectiveness of ABC data in the decision-making process.

An examination of the effectiveness of ABC data in the decision-making process revealed that the process of building an ABC model involved a new criterion against which to assess ABC in the CSCM pilot. The pilot study was designed to evaluate the effectiveness of ABC data in the decision-making process.

Although the pilot studies did not prove that ABC costs were an improvement in the sense of generating additional process knowledge from people in the plant as the strongest argument for the approach, the business process was an important component of the initial appeal of an ABC design process that was a key aspect of the pilot study conducted by the CSCM workshops. Another aspect of the pilot study conducted by the CSCM workshops was a key aspect of the pilot study conducted by the CSCM workshops. Another aspect of the pilot study conducted by the CSCM workshops was a key aspect of the pilot study conducted by the CSCM workshops.

Determining factors in selecting ABC over other cost systems involve determining compatibility with existing systems. Compatibility with existing systems involves determining compatibility with existing systems. Compatibility with existing systems involves determining compatibility with existing systems.

CPC Product Costs: Since the team did not address how to make it fit, with the balancing model compatibility with existing systems, the CPC Product Costs, the CPC Product Costs, the CPC Product Costs, the CPC Product Costs. The Director of CPC Product Costs, the CPC Product Costs, the CPC Product Costs.
Groups. These observations suggest that risk uncertainty has different effects on the innovation stage of
uncertainty to create a situation in which risk failure has different implications for members of the two
specializations. This difference may have created an element of personal risk that interacted with task
management competencies on "special assignments" while corporate staff members were typically
influenced by the "mainstream" factors in the study to encourage mutual and challenging ways to manage
involvement in innovation. Beyond this range, the lack of passion, which is perceived to be unattainable and challenging gives way
range in which risk uncertainty is associated with attainable but challenging tasks that has a positive
asked to design a generic cost system that would apply to diverse production settings. This suggests a
First, the level of risk uncertainty was significantly lower for plant-level designers asked to build
similar risk seems to have been motivated by two factors:
of being overwhelmed by the task. The difference in corporate and plant-level employees' responses to a
Conomy study, who cited these factors as causes for the project getting "pooped down" and their feelings
their expertise and "decentralized" work. This is consistent to corporate staff members who participated in the
system experiments at GKN spoke of having the challenge and freedom of creating a cost model using
those who were involved at every stage of GKN's ABC implementation reveal intrinsic aspects of the work
work demands and individual work preferences influence implementation outcomes. Interviews with
Researchers in the area of socio-technical work design have demonstrated that the interaction of
nume studies of local implementation efforts.

As plant employees allowed some projects to surface that were influential and had little influence in
for examining factors related to the plant-level ABC design task. Nonetheless, interviews, experience
Evidence of factors that influenced corporate ABC implementation provides limited opportunities

ABC Tasks and Implementation

occurred, it is unlikely that the corporate ABC group would have succeeded in achieving the ABC strategy.
referred to think of ABC as a product costing tool. Nonetheless, had the software modifications not
discussion indicates, this evolution was not completely successful because so many managers had been
the ABC software to perform greater flexibility in determining the object of cost analysis. As the case
The External Environment and ABC Implementation

...
practices. This message bolstered the self-image of local ABC designers, who were often discounted by Smith. The presence of ABC as evidence of GM’s innovations was crucial to management accounting because it was a group of management accounting practitioners from a broad range of industries. Communications played a primary role within the company. An example of this is Roger Smith’s external communications of two types influenced implementation: first, external during the acceptance stage.

The firm’s external audits established the pace at which ABC could replace traditional costing practices. Experts, such as Cooper and Kaplan, played an important advisory role during GM’s adoption process. Reinforced by the need for new cost accounting methods and validated by scientific advisory councils, external communication by opinion of external experts, groups such as the Scientific Research Council, experts within the company. Having identified problems with the cost system, the choice of ABC was another environmental factor that influenced ABC implementation was the role of external member of the GM parts family.

ABC was driven by the inherent costs and competitive environment in which plans struggled to survive as a remodeled ABC was introduced. The managers were involved before ABC innovation at ACC and Delco plans were driven by ABC. While ABC innovations at ACC are probably the result of the individuals involved and bring the original data were concentrated among those GM internal organizations: CP’s, ACC, and Delco Electronics. Competition was equally important in motivating adaptations of ABC. Innovations of ABC advanced manufacturing methods and ABC was “exposed” by these other innovations. Withdrawing from the CS/AC pilot study, the plan was implemented several innovations related to adoption. There is also limited evidence of the negative role of environmental uncertainty in the plan that adoption of ABC is consistent with the claim that a combination and environmental uncertainty promote ABC organization to resources in a manner that contributes innovation. The identity of voluntary adapters to survive and grow, “but many have a negative effect on implementation. The identity of voluntary adapters (1987, 240) argues that environmental uncertainty, "simultaneous innovation through an organization’s efforts to motivate and mobilize support. The most enthusiastic adopters of ABC after it was discovered, "K traversed "Kwist and Zand from external marksmen and are frequently cited as a source of GM’s competitive woes (Cookin, 1993)." Similarly, it was no coincidence that plans from ACC and Delco Electronics, which sell in management scrutiny and promoted the search for new cost management approaches.
responsed to the question, "As you consider the future of ABC at GM, what concerns, if any, do you have?"

response to this question is the following: ABC implementation strategies. The following section examines managers' implementation plan, as in the case that managers are aware of critical success factors, they are in a strong situation. If the factors that influence IT implementation and adoption are those that influence the latter stages of ABC.

the money is gone---and link it to the other strategies and systems---and not just a product cost system. We need people to take a look at what activities cost---whether decisions... not to just rank it out every month... If needs to become a decision-making system, does this challenge for the finance is to start looking at the information and using it to make decisions.

mobile challenge of managing ABC:

managers believe to be the greatest challenges because moving from ABC to ABM is a prominent transition from ABC to ABM. It is too early to assess this in GM; however, it is useful to consider what Johnson (1997) claims that the conditions that promote ABC system development initial use from ABC to activity-based cost management.

business process reengineering and to create "activity-based budgets" thus, they show signs of moving different ways. These plans use ABC data to identify non-value-added activities as candidates for removal. Inclusion of the ABC approach, where inclusion is intended by using cost data in fundamentally (one Delta Electronics and one ACG plant) were identified by corporate ABC managers as having.

models for GM part manufacturing plans, ABC is far from a routine. Some of the earliest implementation although 1993 marked the end of ABC implementation from the standpoint of developing ABC.

BEYOND 1993: PROGRESS AND CONCERNS

became a prominent member of ABC user groups and attended national conferences on ABC.

1992 interactions with other firms began to provide external benchmark marks and ideas for adaptation. GM was keen to achieve in their ABC implementation to benchmark from its peers. Nonetheless, 1996 and 1999 GM was keen to achieve in their ABC implementation to benchmark from its peers. Nonetheless, were limited in the early days of implementation, as the interest with Chrysler illustrated, during validity for the ABC concept. Because GM was a keyady ABC adopter, communications with other firms illustrated the importance of ABC to the company. A second role of external communications was providing external input to local managers to ABC, and become the role of repeated example used to demonstrate the
From which individuals returned to their original positions. As early as the first CMC pilot study:

Disciplinary teams with broad production experience. The assignment was given a special assignment.

Implementation concerns system maintenance. ABC systems were typically developed by multi-

ABM or intuition, a second possibility, is that individuals are not the problem

A product costing system, then decision-making process knowledge may be required in the transition to

possibly correlated with ABC success. If production process knowledge is critical for ABC’s success as

from the observation that the GM ABC experience seems to suggest that decision process knowledge is

resemble decision-making processes, should differ from original ABC implementations. One possibility stems

If it were unclear how the individuals needed for intuition, where ABC data would fundamentally

decisions, how would it be different if we had activity-based information

now, we need to look at people to see them with us, and we, “this is the way we currently make

decisions within GM.” The involvement of people who are process-oriented people who work closely with

say, “given that we really have ABC data,” how would we re-engineer the process of making

work from the other direction.” We need to start with where the decisions get made. We need to

We’ve done a good job installing ABC at the implementation level, but based costs. Now we need to

believes that a new approach and new people are needed to facilitate the transition:

Exchanging the results of Cooper & al (1992), one person who was involved with ABC in its inception,

and don’t hear people talking about using ABC data. I think that it could fail if they don’t continue

build models contingent on users’ information needs:

start understanding why. “This failure is attributed to a fundamental incompatibility of cost system design to

routine product cost figures. As an employee said, “we can’t point to widespread use yet and we need to

The most frequently voiced concern about GM’s ABC system is that ABC data are used only for

Individuals

acceptance: individuals, organizational structure, technology, and the external environment

under pressure of how to use the data have been integrated in the analysis of implementation from information to

and what advice would you give top managers about the ABC project? Their responses are organized.
Another concern was internal communications. One manager noted that the reason that evidence

- that is, home is the financial department, its management, and management's ability to

that most managers' information needs. One manager explained this to the "ABC problem":

"ABC problem". This is evident in the earlier remark that ABC designers are unable to design

designer to technical ABC design and lacks the specialized knowledge related to specific classes of

The organizational structure that emerged to support ABC development is specialized in skills

Organizational Structure

ABC as a routine corporate policy rather than "a mission". Leadership's discussion would be centered by a chat about the trend that brings managers to need

discussion the importance of the initial ABC sponsors, employees were hopeful that the cost of

encouraged a belief that ABC was their pet project rather than a widespread corporate initiative. When the transition would create an opportunity. ABC at GM was not overly linked to two individuals. This expressed concern about whether new leaders would emerge, there was guarded optimism that the

successor to the ABC organization within mid-level management expertise. Although managers

stepping into the ABC project. In the latter case, the sponsor's sudden departure and the absence of a

issues, the ABC sponsor died. Earlier remarks about the profound influence both men played in

without the "missionary zeal" attributed to this predecessor. In May 1993, after a brief but deeply

American Operations Group (NOG). The new vice-president of Finance supports ABC, although

corresponded to the realization of the finance functions of D&I and CPC into the new North American

losing several vocal proponents of ABC. In Fall 1992, the Finance Director of CPC realized his commitment

Finally, a concern that emerged in every interview relates to continuity of the ABC effort after

individuals involved in different ABC implementation stages.

initial design team, but was concerned about the implications for maintaining valued training needs of

organizational structure for ABC maintenance at the plan level to replace the organic structure of the

who found system design challenging and rewarding. One manager suggested developing a formal

routine lack of linkage the creative aspects of system design, is an intangible asset for individuals

problems maintaining systems were encountered after system designs were completed. Maintenance, a
Still others are concerned with compatibility of ABC data within CM.

New products costs...
work in recognition. People don't understand why you can just change the volume in ABC to get
the right thing... because ABC, with existing systems... it takes 2-3 months to implement and
big job filling in to accommodate ABC with existing systems... ABC becomes routine... It's still too
biggest problems in GA has been the lack of common systems. I think it becomes easier to push
ABC a more of the other systems are committed. Then ABC becomes routine... Once of the
costs down. People just keep using their routine systems for collecting cost information. One of the
other problems we need to stress the systems. The general systems--that make product
manufacturing... I don't know how they will be able to bring these people onboard.

When I tell them we're talking about extending ABC to the support groups and to non-
although they can get ABC, assembly costs they can still get ABC, costs of other components.
The vehicle assembly issues are still unresolved. For some people, that's a real hang-up because it is
The vehicle assembly issues are still unresolved. For some people, that's a real hang-up because it is
the economic of production processes and... ABC with existing systems. The areas where ABC has not yet
proven useful, vehicle assembly plans and administrative support groups, continue NA, where managers:

Technical Factors

successes and failures is concerning

mitigated. However, early evidence from the first two uses meetings suggests that candid discussion of

Certainly, initial communication is essential to promote awareness, than fear of retaliation must be

sustained and money away.

will get hit over the head with... you saved $100,000. Give me that $100,000 back... They're either
will stand up on our side of world and tell everybody how we used the information they
our decision making. But don't want to
planning. Only those that have used the ABC data in their own decision making... But don't want to
I don't know first-hand of many, it may, plans... where they are saying... I don't know how I made

of ABC usage is not widespread is that plant managers are consuming success stories:


dollars for the corporation... I'm going to decide that it's just not worth the effort.

It gives me a real uneasy feeling because I think that we don't have a few people out there
pressed (Johnson 1992) damaged the ABC implementation project or reduced political support for the
relied on internal vs. external views of ABC. Asked whether the criticism of ABC in the popular

throughput at 1989-93, increased awareness and adoption of ABC by other major US firms
cannot be done by plan. If there is a mess they deliver from the highest levels.
that was also of concern. People in the ABC project until then our preoccupation. So [ABC]
prefix safer. When we closed the Hamilton Plant 1 (a pool) for the plant a strong messa-
especially in companies and are not subject to mass reorganization. They feel
so what? Attitudes of a plant manager... and its kind of thing to agree with sometimes... Mental
and transmission are core transportation business products. We are not going to assign
The key factor with regard to the interest in ABC is lack of it is that material causing, and cultural.
look for continuous improvement that it should be.

Chief problems believe that they are in removed from their areas of concern. That ABC is less likely to become the
management's concern. For ABC's future. Specifically, several managers were concerned that because many
with which those face similar challenges and have adopted similar approaches continue to be present in
Uncertainty, influence, and competitiveness of the external environment and competitiveness

External Environment

processes. ABC costing systems can allow us to do that: our traditional cost systems can't.
cost, we're going to be able to shift them (managers) to ABC at a much lower cost. When we're focusing on
there is ABC. As we adopt LTR... (and similar) from looking at only production costs to the drivers of
will a car is sold to a customer: they are interested in costing processes and not the only tool we
the Executive Team not happen to material... Largest lead-time... From when we first order it
There are methodologies combining one of our signature strategies, called Lead Time Reduction
maintenance of ABC so that system will be ready when managers realize their need for ABC data.
will motivate managers to use ABC data and what the key challenges today is complete implementation and
performance measures. The Vice-President of NAG argues that planning changes in performance needs

Others are less concerned about ABC's current success in believing that it is the best choice in traditional
so it becomes a more concrete exercise and it's a hell of a lot of work -- those are the thing I hear.
I can't get convinced, and many managers are uncertain in the decision.
They don't see the benefits in those operations because what they have today is good enough. It's

Finally, some managers are concerned that the reason ABC data are not widely used is that ABC
problems that we have to address.

Tally plans would take ownership in that model and call it their own, but now it's causing
There are still complaints of a lack of consistency within the corporation. That was internal, so
of other ABC implementations. The role of evolutionary stages of implementation was also examined.

ABC implementation success. The search for influential factors was guided by the information
retrieved to develop a framework for assessing cost system change and to identify important factors in
preliminary research has been quite systematic research on ABC implementation. This paper uses case study
accounting information with advanced manufacturing practices. In spite of its popularity among
activity-based costing has been adopted by companies as a means to recognize management

CONCLUSION

indicates that we [corporate ABC management] haven’t done a good enough job.

came down to the plan manager who I support with personnel. But I think in some cases that
a lot of discussion about the transitions, implications about why they failed. A lot of times it just
There was never any systematic analysis of the reasons that plans fail by the way side. There was
will cause these plans to come back on the next

and there is a lot of pressure to bring them back into the fold. We hope the visibility
discussion and then there is a lot of pressure to bring them back into the fold. We hope the visibility
have fallen by the wayside. We publish this and you see the plans that have gone the way of the
differentiation between plans that were implemented, plans that are maintainable and plans that

The same old issues just keep coming up... Now that everything is implemented we are starting to
address issues of organizational “memory loss”.

transition from ABC to ABM. One manager expressed doubts that the organization had adequately

journey possesses, has been concerned at the corporate level and used to devise strategies for successful
success. What is unclear, is whether this diverse knowledge that key players in GM’s effort year ABC
there is evidence that at least as group, management is aware of the reasons why ABC
business processes. However, if the IT heritage is suggestive of factors external to this transition, then
system software --- its influence on ABM. --- where cost data is used in fundamentally different ways to facilitate
acceptance and routinization of ABC --- where ABC is a replacement for the traditional, labor-based cost

It is impossible to say whether GM’s ABC project will succeed in characterizing the transition from

Summary

decision-making in the new manufacturing setting.

they remain convinced that it is a necessary tool for promoting continuous improvement and supporting
project, managers responded that, while they were forced to reevaluate their assumptions about ABC.
management system change.

Building researchers will gain an understanding of the complex socio-technical forces that influence cost outcomes will be needed. Thus, through continued iteration between empirical investigation and theory, empirical empirical studies to determine the relative merits of each model in explaining implementation outcomes, empirical studies to explain ABC implementation success, and a larger population of ABC adopters. Thus, empirical research is the application of a comprehensive framework to ABC implementations. Finally, a comprehensive condition and shape our perceptions of reality. Consequently, a necessary second direction for future researchers will have more opportunities to refine the model of ABC implementation. Conceptual lenses

As more companies adopt ABC and evidence on sources of success and failure mounts

second phase of this research

The relationship is dynamic, context dependent and symbiotic. This question will be taken up in the corporate implementation. Although plan implementations begin with the improvements for a corporate ABC strategy,

Implementations are not peculiars of implementation, the success of which support and propel corporate acknowledged that there were few “shining stars” among the early ABC sites. Thus it appears that the plan prominently as a determinant of corporate ABC adoption. Virtually every manager interviewed implemented implementation. Indeed, plan-level success—ass derived by ultimate usage of ABC data—did not negate preliminary evidence suggests that plan-level implementation does not move in lock-step with corporate implementation is an important avenue for refining our understanding of ABC implementation.

Knowledge. This suggests that understanding the unique factors influencing plant-level ABC micro-foundations, in part because a perceived strength of ABC is the collection of plant-level evidence ABC adoption from the perceptions of the firm. However, ABC implementation has strong evidence from other’s implementation of ABC is consistent with a context-sensitive, evolutionary model
1. See Kwon and Zmud (1997) for a review of empirical studies on information technology and Zmud’s (1985) sequential model was modified by Cooper and Zmud (1990).

2. See Kwon and Zmud (1987) for a review of empirical studies on information technology.

3. Kwon and Zmud (1987) suggest that general frameworks based on the literature, Kwon and Zmud, since there is evidence that General Electric's Paced ABC methods

4. Production workers and union representatives are not included in these studies because no similar cost systems were developed for manual ABC systems.

5. Since case studies include subjective evaluation of qualitative data, the researcher's experience numbers of plan implementations (Andresen and Young 1993).

6. The names of company groups and committees that are frequently mentioned are spelled out in their

7. Since evaluation periods are conducted, the implications of the evaluation of ABC are clear. Plan experiment to a corporation-wide implementation and the number of implementation teams. Their contribution is discussed (Andresen and Young 1993).

8. Although managers could conceptually manage operations better with improved cost data, they were not part of the corporate ABC implementation process and union representatives are not included in these studies because no similar cost systems were developed for manual ABC systems.

9. When managers were asked to explain the organization's increase in the organizational size, they were not part of the corporate ABC implementation process and union representatives are not included in these studies because no similar cost systems were developed for manual ABC systems.

10. The study's results showed that the plan managers in the company were oriented to manage the product costs in one-cell basis, but the company's differences in product volume within product lines did not affect the results in the similar

11. The study's results showed that the plan managers in the company were oriented to manage the product costs in one-cell basis, but the company's differences in product volume within product lines did not affect the results in the similar

12. The study's results showed that the plan managers in the company were oriented to manage the product costs in one-cell basis, but the company's differences in product volume within product lines did not affect the results in the similar.
Current trends in plant size, process complexity, and data availability suggest that the local economic model, which the plant adopted, is applied to plans with a week learning the team. ABC concepts and helping them design a rudimentary ABC model.

The second plan was initiated to detect data that was hidden on the cost side. Given the local design team's initiative to detect data, ABC was implemented in a simple ABC system as presented in the first approach.

15. The ABC Designer realized, "Some were volunteers and some agreed after a lot of arm-twisting." The design team was asked to provide data on the success of providing data. The Pioneer location lost its momentum... because they believed it was mandatory. The director of the ABC system was replaced. The system was the least productive. The Pioneer's experience confirmed that the ABC model could be used in a production process. The pilot model was tested.

14. Three reasons were cited for the failure of ABC to be used at the plant level: First, the management understood the ABC model too complex for anything other than basic costing and did not offer it to operators. Second, the ABC model was used in the same way as a management tool. Third, as a result of management's reluctance to change, executive union on ABC.

13. The pilot project required an understanding of managerial accounting to change. With traditional cost systems and budgetary controls, the management realized that there was no improvement in the order of ABC's implementation. However, in 1992, the Vice President of Finance for ABC indicated that the ABC model would be used by shop workers. Even by 1992, the site was not ready for ABC implementation. In keeping with traditional views of cost, there was no expectation that ABC data would be used by shop workers.

12. Minutes of the first CWS meeting on January 11, 1992, contain the following note: "ABC changes must be made to improve the application of ABC, determine benchmarks, set targets, develop action plans to eliminate the weaknesses that were identified primarily by plant-level ABC designers and group-level leaders."

11. Interestingly, the word is used in a manner similar to the term "ABC," but it is not used in the language of "activities."
professional accomplishment of which he was most proud.

21. In an interview shortly before his death, the ABC Oversight Team Leader characterized his involvement with GM’s ABC initiative this way, saying that championing ABC at GM was like

22. The evaluation was: 1) 1986 expansion of two-product feasibility study to transactions cost pilot study; 2) 1987 report of Piano pilot results to CPC management; and, 3) 1990 evaluation of

CSPC pilot study.

because some plans are subdivided for ABC modeling purposes.

20. There is not a one to one relationship between plans (single physical locations) and ABC models.

became available. For the first time, ABC would be fully integrated with financial accounting

valuation because they wanted each department to track its variances at one time, not year by year as new implementations

inventory valuation in 1994. Up until then, the auditors had resisted ABC as a method of inventory

the company’s auditors had approved the switch to ABC product costs for purposes of comparative

announcement by the Director of Current Product Cost NDO that with complete implementation of ABC,
Appendix A

A Glossary of Acronyms for General Motors Organizational Committees and Groups

SAC
Science Advisory Committee
A group of external experts, many from academia, who conduct a bi-annual study of some aspect of GM operations each year and report findings and recommendations to the Executive Committee.

PSIC
Production Scheduling and Inventory Control System
An integrated operations scheduling system that provides data to and receives data from the ABC System.

NAO
North American Operations
Research used by all operating divisions.

GMRL
GM Research Laboratories
Corporate research and development group that conducts basic research with the coordination of NAO and the NAO coordination around product platforms.

GPT
GM Power Train Coordination of Propulsion/DOC and CPC powertrain operations that occurred.

EDS
Electronic Data Systems
Group responsible for company information and operating systems.

GM
General Motors

CMMC
The Cost Systems and Measurements Council
The CMMC workshop was the support group to the Executive Level committee. The CMMC workshop was comprised of two subgroups: the cost workshop and the measurement workshop. The CMMC workshop was the support group to the Executive Level committee.

NAO
North American Operations

CPC
Control-Power-Cruise Group
Formed in the 1984 company reorganization. Subsumed under NAO in reorganization around product platforms.

BOC
Buick-Oldsmobile-Cadillac Group
Formed in the 1984 company reorganization. Subsumed under NAO in reorganization around product platforms.

ACG
Autowave Components Group
Includes divisions such as AC Rochester, Harrison Radiator, and others.

These groups typically sell to both internal GM divisions and to external customers.
Books:


Tisel, E. L. and K. W. Bankworth. 1951. Some Social and Psychological Consequences of the Longwall


Management Working Paper, University of Idaho:

Svensson, D. 1994. The Effect of Firm Characteristics on Applications of Activity-Based Cost

(December 30): 6.


Figure 1
A Factor-Stage Model of Information Technology Implementation

Six Stages of Implementation

Initiation ➔ Adoption ➔ Adaptation ➔ Acceptance ➔ Routinization ➔ Infusion

Five Contextual Factors that Influence Success at Each Stage of Implementation

Individual Characteristics
Organizational Factors
Technological Factors
Task Characteristics
External Environment

Implementation Stage T
Implementation Stage (T+1)

Adapted from Kwon and Zmud (1987) and Cooper and Zmud (1990)
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<th>Competition</th>
<th>Heterogeneity of Demands</th>
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<tr>
<th>Relevant Factors</th>
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<table>
<thead>
<tr>
<th>Implementation Success by Literature Source</th>
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<tbody>
<tr>
<td>Implementation (Kwon &amp; Zhang 1987)</td>
</tr>
<tr>
<td>Literature Evidence</td>
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<td>Literature</td>
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<td>Implementation</td>
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<thead>
<tr>
<th>Candidate Variables for Exploratory Analysis of Factors Influencing Activity Based Costs</th>
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**Table 1**
<table>
<thead>
<tr>
<th>Title</th>
<th>Period of Involvement</th>
<th>Profile of Interviewees: ABC Project Involvement 1/66 - 1/2/93</th>
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<tr>
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<td>Table 2</td>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Table 2</td>
</tr>
</tbody>
</table>
Table 2 (continued)
Profile of Interviewees: ABC Project Involvement 1/86 - 12/93
Table 3

Effect of Variables that Influenced ABC Implementation at GM

Each cell contains the observed influence of the variable on the implementation stage and a brief reference to the evidence that supports the claim. Factors in *italics* are those which emerged from the case analysis and were not identified initially as a candidate variable (Table 1).

<table>
<thead>
<tr>
<th>CONTEXTUAL FACTOR</th>
<th>Initiation</th>
<th>Adoption</th>
<th>Adaptation</th>
<th>Acceptance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individual Characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disposition toward change/ Intrinsic</td>
<td>+: sponsor desire to make a difference</td>
<td>+: strong advocate</td>
<td>+: role of CPC leading change</td>
<td></td>
</tr>
<tr>
<td>reward in change</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Tenure/ Process Knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role Involvement</td>
<td>+: centrality to Comptroller’s job</td>
<td>+: design skills and user buy-in</td>
<td>-: ABC design owners slowed commomization</td>
<td>+ ABC User’s Group</td>
</tr>
<tr>
<td>Informal support (e.g., sponsors,</td>
<td>+: Pontiac Comptroller</td>
<td>+: centrality to Director’s job</td>
<td>+: CPC Director of Finance</td>
<td></td>
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<tr>
<td>champions)</td>
<td></td>
<td></td>
<td>-: limited opportunity for debate</td>
<td></td>
</tr>
<tr>
<td><strong>Organizational Factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centralization</td>
<td>-: Cooney Rept.</td>
<td>-: CSMC slow assessment</td>
<td>: commonization</td>
<td>: “blitz” as codification of simple implementation</td>
</tr>
<tr>
<td>Functional specialization</td>
<td>+: role of GMR</td>
<td>+: pilot study built support</td>
<td></td>
<td>: “blitz” as means of satisfying requirements</td>
</tr>
<tr>
<td>Internal communications/</td>
<td>+/- parallel experiments</td>
<td>-: innovations originated with multi disciplinary local teams</td>
<td></td>
<td>+: common cost systems committee</td>
</tr>
<tr>
<td>Horizontal versus Vertical</td>
<td>+/- specialists can’t approach problem with clean slate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training investments</td>
<td>+: horizontal discussion among stamping plants</td>
<td>- horizontal discussion threatened controlled experiments of pilot study</td>
<td></td>
<td>+: CCL 2860</td>
</tr>
<tr>
<td></td>
<td>+: threatened traditional vertical communications</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>+: theory focus, aim to persuade about problem</td>
<td>+: codified implementation</td>
<td></td>
<td>+: implementation versus use and maintenance training</td>
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<td></td>
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</tr>
<tr>
<td>CONTEXTUAL FACTOR</td>
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<td>-------------------------------------------------------</td>
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<tr>
<td><strong>Technological Factors</strong></td>
<td></td>
<td></td>
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<tr>
<td>Complexity for users</td>
<td>+: pragmatic</td>
<td>+: compared to alternatives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compatibility with existing systems/ Across ABC systems</td>
<td>+: failure to address ‘fit’ of ABC with other systems</td>
<td></td>
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<tr>
<td><strong>Representation accuracy of model</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative improvement over existing system (accuracy and timeliness)</td>
<td>+: product cost changes</td>
<td>+: intuitive appeal</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Relevance to managers’ decisions/ Compatibility with firm strategies</strong></td>
<td></td>
<td>+: pilot study verification of product cost changes</td>
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<tr>
<td></td>
<td></td>
<td>+: decision-support focus of pilot study</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>+: software modifications to support new ABM objectives</td>
</tr>
<tr>
<td><strong>Task Characteristics</strong></td>
<td></td>
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<tr>
<td>Uncertainty / lack of goal clarity</td>
<td>+: challenge, using expertise</td>
<td>-: subjectivity in design</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variety</td>
<td>-: Cooney Rept., excessive</td>
<td></td>
<td></td>
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<tr>
<td>Worker autonomy</td>
<td>+: freedom to design model</td>
<td>-: subjectivity in design</td>
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<tr>
<td>Worker responsibility/ Personal Risk in task outcomes</td>
<td>-: Cooney Rept.</td>
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<tr>
<td><strong>External Environment</strong></td>
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<tr>
<td>Heterogeneity of demands</td>
<td>+: ABC value linked to process/product diversity</td>
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<tr>
<td>Competition</td>
<td>+: site of innovations</td>
<td>+: site of innovations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental uncertainty</td>
<td>+: threats of divestiture</td>
<td>+: threats of divestiture</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-: turbulence within plant</td>
<td></td>
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</tr>
<tr>
<td>External Communications/ Role of External Experts</td>
<td>+: SAC, Cooper and Kaplan</td>
<td>+: Smith’s talk to NAA</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>+: bench marking other firms</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>-: auditor’s preference for standardization before use</td>
</tr>
</tbody>
</table>

1. Four of Kwon and Zmud’s (1987) six stages of implementation are considered.