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MANUFACTURING INSIGHTS:  
"MANAGING TEAMS IN MANUFACTURING"

SCENE 1  
FBI WARNING

SCENE 2  
ANIMATION: SME LOGO

SCENE 3  
STANDARD MI OPENING

NARRATOR:

MANUFACTURING INSIGHTS...MANUFACTURING  
ENGINEERING MAGAZINE'S VIDEO SERIES FOR  
INDUSTRIAL MANAGEMENT.

SCENE 4                   NARRATOR:

THIS PROGRAM EXAMINES "MANAGING TEAMS IN MANUFACTURING", OUTLINES THE PRINCIPLES  
OF SUCCESSFUL TEAM FORMATION AND LOOKS AT WHAT PREVENTS SOME TEAMS FROM REACHING  
THEIR GOALS.

SCENE 5                   WE'LL SEE HOW HEWLETT PACKARD'S PRINTER  
DIVISION IS APPLYING TEAMS TO QUICKLY  
RESPOND TO FREQUENT DESIGN AND  
PROCESS CHANGES...

SCENE 6                   ...HOW MKM MACHINE TOOL COMPANY USED TEAM  
BASED CONTINUOUS IMPROVEMENT TO INCREASE  
SALES BY OVER 40 PERCENT...

SCENE 7                   ...HOW THE TEAM CONCEPT HAS ENABLED  
PROCESS EQUIPMENT COMPANY ELIMINATE  
MIDDLE MANAGEMENT AND DEPARTMENTAL  
FUNCTIONS...

SCENE 8                   ...AND HOW DETROIT DIESEL IS SUBSTANTIALLY INCREASING  
MARKET SHARE BY DEPLOYING MANUFACTURING TEAMS

THROUGHOUT IT'S ORGANIZATION.

FADE TO BLACK

SCENE 9  
HP-3 14:57

HP-3 9:33

BUTLER GRAPHIC A   NARRATOR:

TODAY'S INTENSE GLOBAL COMPETITION AND THE NEED TO  
PRODUCE QUALITY PRODUCTS FASTER AND AT LESS COST  
HAS CAUSED COMPANIES TO RETHINK THE VALUE OF THE  
"TRADITIONAL ORGANIZATIONAL STRUCTURE" WHERE PROJECTS  
FLOW SEQUENTIALLY, DEPARTMENT TO DEPARTMENT.

A BETTER APPROACH IS WHEN PEOPLE FROM EACH FUNCTION  
CAN FORM A TEAM, TACKLE A SPECIFIC TASK, AND RAPIDLY  
FIND A SOLUTION TO A PROBLEM, FILL A CUSTOMER NEED, OR  
ADOPT NEW TECHNOLOGY.

SCENE 10               M-1 16:50

EFFECTIVE TEAM FORMATION AND OPERATION  
REQUIRES A BASIC CHANGE IN THE EXISTING  
CORPORATE CULTURE.   TO BE TRULY  
SUCCESSFUL, MANAGEMENT AND EMPLOYEES MUST  
VIEW EACH OTHER NOT AS ADVERSARIES, BUT AS  
PARTNERS WORKING IN A CLIMATE OF  
MUTUAL TRUST.   MANAGEMENT MUST PROVIDE  
A CLEAR DESCRIPTION OF EACH TEAM'S

PURPOSE AND GOALS AND EMPOWER TEAM MEMBERS  
TO MAKE DECISIONS AND IMPLEMENT THEM  
WITHOUT UNDO INTERFERENCE.

THE BASIC FUNCTION OF A TEAM IS NOT MERELY  
TO RESPOND TO CHANGE...BUT TO CREATE  
CHANGE.

SCENE 11

CG: DAVID EISENHART, PARTNER

COOPERS & LYBRAND

EISENHART ON-CAM (01:08:56 - 01:09:32)

The 90's are going to be a teaming environment. The days of the individualist who may have a very good I.Q. and who may be a very good individual player and very intelligent-it's difficult to create change without a team. You're going to ask the team to go in and make the change. You're going to ask groups of people to accept the change and work with that team in terms of changing their environment. These are all group atmospheres, these are teaming, and some of the aspects of the managers of the 90's are going to be their ability to communicate and effectively create change in their environment.

SCENE 12

Reel 1816

8:59

HP-5 09:59 -10:19

CON'T INTO

SCENE 13 NARRATOR

MOST TEAMS OPERATE UNDER THE LOOSE  
DIRECTION OF A SENIOR MANAGEMENT TEAM. AS  
THEY MAKE THEIR DECISIONS, BOTH TEAMS MUST

KEEP A SHARP EYE ON THE COMPANY'S BOTTOM

LINE.

SCENE 13

EISENHART ON-CAM (00:14:01 - 01:14:44)

We find that teams that are economically focused have something that provides the measurement. So it's not just a matter of quality. What do we get out of it? What's in it for us and how can we measure it? And that becomes one of the benchmarks, not just how do we feel-we feel better, jeez, we're really knowledgeable. Having done that with the senior management team, then you're able to go out and say, Look, we're going to fund four or five teams. We're going to do it in this kind of a process time in terms of time frame, and we set it up by priority. We've not only done it by priority financially, but we've done it on a sequential basis-what has to be done first, second and third and you set your teams up accordingly.

SCENE 14 M5:28:50

EISENHART OFF-CAM (01:14:52 - 01:15:44)

EISENHART

ON-CAM When you start talking about a team itself, we recommend the team be about four to six people, Not a crowd.

You can't control a crowd. We look for diverse participation. If it's a shop floor problem and it's customer focused, you want to have someone there from the sales and marketing function. You want to have someone there who's looking at it from possibly a cost management perspective. You want to have someone there who's there from an engineering point of view. Someone there, maybe more than one, maybe two, if it's a shop floor

environment where you're talking about a cell.

You want that participation and you want it to be a well rounded team. That diverse input will help you go out and scope what are the issues.

SCENE 15

D-0 23:08

ALTHOUGH MANAGEMENT MUST EMPOWER THE TEAM

TO ACT, IT MUST ALSO SET CLEAR GOALS AND

BASIC RECOMMENDATIONS ON HOW TO REACH

THEM.

SCENE 16

EISENHART ON-CAM (01:01:38 - 01:15:44)

The team itself needs training about what the process is they're going through, how they're going to go about it and, more importantly, what is the subject matter they're trying to change.

You're going to have to explain the process-how it came about, how you reached your recommendation, what it is you want them to participate in, what the environment is you're asking them to change-before you can ask them to go out an engage themselves to work as part of that team.

SCENE 17

P-10:7:14 NARRATOR:

TEAMWORK REQUIRES A STRONG LEADER...SOMEONE WHO

CAN KEEP THE TEAM FIXED ON ITS GOALS AND

OVERCOME ANY FUNCTIONAL RIVALRIES OR DISPUTES THAT

MIGHT OCCUR.

SCENE 18

CG: PROF. KIM CLARK, Ph. D.

HARVARD BUSINESS SCHOOL

CLARK ON-CAM (04:22:05 - 04:22:44)

All of our talk about teams-what turns out to make a huge difference is leadership. So my view is, when you're setting up a team, don't set up a team without thinking through who is going to lead that team, who's going to be the individual you're going to entrust with having overall responsibility for the operation of that team.

SCENE 19

D-0 22:49 NARRATOR:

INDIVIDUAL DEDICATION, AND CONTINUITY OF TEAM

MEMBERSHIP IS JUST AS IMPORTANT AS LEADERSHIP.

SCENE 20

CG: PROF. STEVEN WHEELWRIGHT, Ph. D.

HARVARD BUSINESS SCHOOL

WHEELWRIGHT ON-CAM (03:12:05 - 03:12:38)

And I think finally a thing that is an important "do" for a team and makes the team work is that you have to get people in early enough that really feel that they helped to create the team's charter, its working relationship. One of the things that is most detrimental to teams is changing people mid-stream. That getting new members half way through a new project up to speed and having the same sense of ownership is almost impossible for most individuals and most teams.

SCENE 21

NCR S.E.

CAD/CAM SHOTS

NARRATOR:

A CAREFULLY STAFFED AND PROPERLY LED TEAM

CAN PRODUCE DRAMATIC RESULTS. PRODUCT

DEVELOPMENT IS JUST ONE EXAMPLE.

SCENE 22

WHEELWRIGHT ON-CAM (03:04:27 - 03:05:11)

From our research on product development, the real payoff from teams is that you get three things. You get better products-- that is, the quality tends to be better, quality in the sense of integrity in the system, the components fit together better, it's better matched to what the customer really needs. A second payoff is that you actually get it faster--that is, the amount of time it takes to get the product to market is much shorter. And finally, you get it for fewer resources. It doesn't take as many engineering hours, as many total resources in both dollars and people that it would take if it took you longer to get that same project done where if you did it functionally rather than with a team.

SCENE 23

HP-4 04:12:09 NARRATOR:

AS MANUFACTURING AND MARKETING INCREASE  
IN COMPLEXITY, TEAMS AND TEAMWORK WILL  
PLAY AN INCREASINGLY IMPORTANT ROLE.

SCENE 24

WHEELWRIGHT ON-CAM (04:05:04 - 04:05:47)

My sense is that if you had a small narrowly focused company you could probably get by without having a big commitment to teams, simply because there's so few people. They communicate, they know each other. In any organization that is complex, that's becoming a global organization, that cuts across functions, it's inevitable that you'll have to learn the skills that we would associate today with effective team management. So



resistance because people will typically respond by saying, Oh my gosh, how much change is there going to be.

SCENE 37  
WINBY OFF-CAM (01:04:48 - 01:05:06)

HP-3 15:22                    But the issue is in this business, in Hewlett Packard and in the high-technology arena, change has to be embraced. I mean it has to be something you learn to live with and you manage and you hopefully manage it in a way where it's on your side.

SCENE 38                    NARRATOR:

HP-4 12:09                    THE TEAMS ARE GIVEN A GREAT DEAL OF  
  
LATITUDE IN DECIDING HOW THEY OPERATE.

SCENE 39  
WINBY OFF-CAM (01:15:00 - 01:15:40)

HP-4 8:34                    We designed the process so that there are minimal critical specs that we all sort of agree to, but there's lots of elbow room for people to design and customize their work systems based on their set of values and their business.

WINBY ON-CAM                The reason we do that is because we're trying to stimulate commitment and ownership and innovation and not standardize everything so that everybody's doing it one particular way.

SCENE 40                    NARRATOR:

HP-3 00:57                    THIS INTENTIONAL DEPARTURE FROM  
NOTE: THIS VIDEO                STANDARIZATION IS DESIGNED TO PRODUCE  
RUNS THRU END OF                COMPANY-WIDE FLEXIBILITY.  
SCENE 41

SCENE 41  
WINBY OFF-CAM (01:18:09 - 01:18:15)

Probably the top attribute of the kind of

team system we've designed here at Boise  
is its flexibility.

SCENE 42  
WINBY ON-CAM (01:19:23 - 01:20:09)

Part of the flexibility is that you're  
rotating and multi-skilling people up and  
down the team process. The skill based  
pay system is helping reward and motivate  
people to multi-skill up and down the  
process. People, rather than seeing  
themselves as having one job, they see all  
the team members-the team is the job.

SCENE 43  
NARRATOR:  
HP-3 8:11:16 WITH THE CHANGES IN HOW WORK IS PERFORMED  
COME CHANGES IN HOW PEOPLE ARE REWARDED  
HP-3 17:14 FOR THEIR EFFORTS. HEWLETT PACKARD  
FOSTERS THE CONCEPT OF "LEARN MORE, EARN  
MORE".

SCENE 44  
WINBY ON-CAM (01:09:55 - 01:10:57)

The pay issue-what we're doing is  
experimenting, if you will, with different  
types of pay structures and processes in  
order to support these new work designs.

HP-4 12:09 So for example in product development  
we're taking a look at team-based bonus  
systems to improve time to market and to  
improve cross functional work.  
HP-3 02:59 In the  
factory we're looking at skill based pay,  
which has been around for a long time.

SCENE 45  
NARRATOR:



that's happened.

SCENE 49  
HP-5 8:56  
VIDEO CONT. INTO SCENE 50  
NARRATOR:  
SETTING CLEAR GOALS IS ESSENTIAL FOR TEAM  
SUCCESS.

SCENE 50  
WRIGHT OFF-CAM (04:11:32 - 04:12:29)

Measurement is something you should always do with teams, something that we didn't do soon enough. What we were really building was a learning system, a feed-back system. Doing teams without giving them a score card, actually having them help design what the measures are going to be for success for them doesn't give them any basis for knowing whether they're winning or not.

WRIGHT ON-CAM  
Just doing teams as some kind of social intervention has very limited impact.

SCENE 51  
TEAM PHOTO REEL  
NARRATOR:  
THE COOPERATION AND BONDING THAT OCCURS IN  
SOME TEAMS CAN PRODUCE SURPRISING RESULTS.

MUMBLE UNDER  
VIVIAN WRIGHT  
VIVIAN WRIGHT HAS SEVERAL EXAMPLES,  
INCLUDING THIS ONE.

SCENE 52  
WRIGHT ON-CAM (04:16:12 - 04:16:44)

Another example is a team that had a hearing impaired person on their team. In some of their goal setting and planning, they decided that all of them would learn to use sign language so that he could really become a member of their team. They discovered two things. One was that Mike had a great sense of humor, and then I noticed one evening that they were signing from one end of the line to the other and across noisy equipment and it was improving their ability to communicate in the work environment.

SCENE 53

NARRATOR:

HP-3 06:55  
VIDEO CONT. TO  
SCENE 54

NOT EVERY EMPLOYEE IN EVERY COMPANY CAN FIT  
INTO A TEAM ENVIRONMENT.

SCENE 54

BOISE PRINTER DIVISION  
CREIGHTON OFF-CAM (03:09:08 - 03:09:51)

We did have some people who didn't feel  
like this was the right environment for  
them when we began,

CG: SKIP CREIGHTON  
PRODUCTION MANAGER  
CREIGHTON ON-CAM

and fortunately we're a large manufacturing site. We  
were able to find good career positions for them in  
other manufacturing areas around the site.  
And so this isn't something that everyone  
feels comfortable in doing. A lot of  
people said, I like to come to work, I  
like to spend my eight hours and go home.  
I'm not interested in taking on additional  
roles, taking on what used to be done by  
other levels in the organization. I don't  
feel comfortable in that. So I think  
that's something people need to understand  
that this isn't for everyone and that  
there will be some people who find reasons  
to go somewhere else, and that's OK.

SCENE 55

NARRATOR:

HP-4 7:27  
VIDEO CONT. INTO  
SCENE 56

THERE ARE NO SET RULES FOR CREATING  
SUCCESSFUL, HARMONIOUS TEAMS.

SCENE 56

CREIGHTON OFF-CAM (03:10:48 - 04:11:19)

I think the interesting part of all of  
this is there is no real recipe, there is  
no real one way of doing it, and there's a  
lot of trial and error.

CREIGHTON ON-CAM

And I think you need to be willing to let people try and  
you need to be willing to practice some

forgiveness because you don't have all the answers going in. Certainly the management team we had, we didn't have all the answers and we made our fair share of mistakes.

SCENE 57

NARRATOR:

TEAM PICTURE

HEWLETT PACKARD FOUND TEAM

BONDING AWAY FROM THE WORK PLACE IMPROVES

TEAM PERFORMANCE.

SCENE 58

CREIGHTON ON-CAM (03:14:42 - 03:15:30)

We have established a budget for teams to use on an annual basis, and typically they break that into two events, each six months, that enables them to go away for some portion of the day outside of the work environment and just get to know one another in a more fun environment. It might be out floating a river, it might be playing a round of golf together, it could be just a picnic in a park. ... We find that the more the teams are together, the better they perform.--**FAST FADE**--

-FTB-

SCENE 59

NARRATOR:

M-5 17:59-18:09

MKM MACHINE TOOL COMPANY, IS A

150-PERSON UNIONIZED MACHINE SHOP IN CLARKSVILLE,

INDIANA. MKM HAS BEEN HIGHLY SUCCESSFUL WITH TEAMS

EXT. MKM

FROM HI-8MM

AND HAS REPORTED MARKED IMPROVEMENT IN

MANAGEMENT-EMPLOYEE RELATIONS.

SCENE 60

CG: ROBERT MOORE

PRESIDENT

MKM MACHINE TOOL CO.

MOORE ON-CAM (02:10:52 - 02:11:22)

Today we have an open relationship with the union. Much more communication is involved. As a matter of fact, we're engaged in our contract negotiations, and this is the first time in the history of this company that contract negotiations are being done in a team-based style and they're more a discussion than they are a bargaining.

SCENE 61  
MOORE OFF-CAM (02:13:13 - 02:14:02)

If we were to look at evidences of success in our union-management relationship, I would have to say that in 1988 we probably were receiving a half a dozen grievances a month, and that's a good indication that there's a great deal of unhappiness among the employees.

MOORE ON-CAM            In the last two years we have received two grievances. One was frivolous. The other one was more serious but it was dealt with in such a way that it was more welcome than not. And it proves in my thought that the process is truly working.

Scene 61A  
Graphic "Scales of Justice"  
CG: National Labor Relations Board

NARRATOR:

THERE ARE LEGAL ISSUES TO BE AWARE OF IN FORMING TEAMS WITHIN YOUR ORGANIZATION. EMPLOYERS MUST BE KNOWLEDGEABLE ABOUT THE NATIONAL LABOR RELATIONS BOARD RULING THAT TEAMS CAN NOT REPLACE "LABOR ORGANIZATIONS".

SCENE 61B  
M-1 20:13

NATIONAL LABOR LAW SAYS TEAMS CANNOT ADDRESS ISSUES SUCH AS WAGES, WORKING CONDITIONS, OR THE VIEWS OF OTHER WORKERS.

SCENE 61C

M-1 15:53 THE RECENT RULING ALSO STATES TEAMS CANNOT BE DOMINATED BY  
MANAGEMENT.

M-5 23:37 EMPLOYERS MUST DECIDE IF THEY REALLY WANT DIS. OUT  
EMPLOYEES TO HAVE POWER, OR IF THEY WANT  
MANAGEMENT TO KEEP IT.

SCENE 61D

M-1 15:53-15:59 GIVEN ALL THESE RESTRICTIONS YOU MAY START TO WONDER WHY  
COMPANIES ARE STILL FORMING TEAMS?

M-5 28:50 THE REASON IS TEAMWORK HAS PROVEN TO OUT PERFORM  
INDIVIDUAL EFFORTS. TEAMS ARE HERE TO STAY.

SCENE 62

MOORE ON-CAM (03:06:49 - 03:07:22)

We make sure the channel of communication  
is wide open with the union so that we  
don't interfere with the federal laws  
governing the bargaining process.

SCENE 63

NARRATOR:

M-5 8:25-8:41 TREATING EMPLOYEES AS EQUALS, AS VALUABLE  
COMPANY ASSETS, IS IMPORTANT IN ALL TEAM  
OPERATIONS.

SCENE 64

MOORE ON-CAM (02:21:15 - 02:21:52)

Typically, relationships with employees  
have been based on an adversarial  
relationship, and this is the only method  
that I've seen that develops a  
relationship whereby the employees-not  
only does management realize that they are  
important-they are the decision makers.

SCENE 65

M-1 22:37-22:43 NARRATOR:  
BEFORE TEAMS WERE FORMED, SALES AT MKM  
M-5 20:04-20:10 WERE FLAT. SINCE TEAMWORK HAS TAKEN HOLD,  
MKM'S SALES ARE UP 40% OVER LAST YEAR.

SCENE 66 NARRATOR:  
IF PROPERLY HANDLED, TEAMS CAN BE AN  
M-1 14:27 IMPORTANT TOOL FOR CONSTRUCTIVE, ORDERLY  
CORPORATE GROWTH.

SCENE 69  
MOORE ON-CAM (02:18:42 - 02:19:22)

I grew up in the 1960s and I came from somewhat of an authoritarian background and I believed that's how you motivate people. I've since found through this process that you really can't motivate people, you can only create an environment where they'll motivate themselves.

SCENE 72 NARRATOR:  
M-1 21:40 SUCCESSFUL TEAMS ARE MARKED BY THE FREE  
DIS. OUT EXCHANGE OF IDEAS AMONG ALL EMPLOYEES.  
THERE CAN BE NO FEAR OF RETALIATION FOR  
PRESENTING A CONTROVERSIAL OPINION.

SCENE 73  
JAMES SMITH  
DIRECTOR OF WINNING MANUFACTURING  
SMITH ON-CAM (04:05:00 - 04:05:57)

Honesty is the major issue, of being able to have an honest "don't come in playing games". When we're doing teamwork, it affects the business, it affects our customer satisfaction, it affects our relationships with each other. So we want people to be honest and upfront. Amnesty. It's interesting how we talk to people. Everyone has an equal say. Whether Rob Moore the president is here,



people.

SCENE 77

NARRATOR:

P-9 9:22

ONE OF THE MOST DRAMATIC CHANGES

ASSOCIATED WITH TEAM BUILDING IS THE

P-9 04:10

CHANGE IN EMPLOYEE ATTITUDE, HELPED IN

PART BY DIRECT CONTACT WITH CUSTOMERS.

SCENE 78

CG: POLLY TURNER

CREATIVE LEADER

TURNER ON-CAM (08:14:00 - 08:14:21)

It used to be the employees would come in, they knew what their day's work was. They punched the clock in, did their jobs, out, It was very routine. and my job was routine at the time. Now nothing's routine. Everybody comes in. They see what needs to be done that day. They do it their style, their way, and it's really a lot more exciting.

SCENE 79

TURNER OFF-CAM (08:15:21 - 08:25:36)

P-9 23:30

And now they're in charge of their own day, and they are really only responsible to the customer.

TURNER ON-CAM

And they are in direct contact with customers now, and it just seems to really help their attitude. They feel a lot more important and a lot more in charge of their job.

SCENE 80

TURNER ON-CAM (08:26:06 - 08:26:27)

GROUP PICTURE

We had a big order come in from a customer in Newport News, Virginia, so we chartered an airplane and took 15 of them down there on a nice turbo prop airplane.

PLANE PICTURE

SCENE 81

TURNER OFF-CAM (08:26:35 - 08:26:50)

PLANT PICTURE                    So they could see where it was going to go  
and how it was supposed to function,

TURNER ON-CAM                    so when we got the prints in and the parts in  
and they were working on it, they knew  
exactly what the end product was going to  
be and how it was going to be used. And  
it wasn't just the engineers that visited.  
It was the people that were going to do  
the work.

SCENE 84                            NARRATOR:

P-10:10:28                        THE COMPANY PROVIDES CONTINUOUS TRAINING  
  
FOR ITS EMPLOYEES, INCLUDING ONE SUBJECT  
  
NOT USUALLY OFFERED.

SCENE 85  
BEACHLER ON-CAM (07:22:52 - 07:23:22)

We trained the entire company in  
accounting because we distribute to them  
our financial statements. That gives them  
an opportunity to understand better what's  
going on. In particular we want them to  
understand things like the difference  
between cash flow and profitability, what  
depreciation does to things. So they get  
some idea when they're making decisions  
how it's going to impact.

SCENE 86                            NARRATOR:

P-9:16:20                        UNLIKE MANY COMPANIES, PROCESS EQUIPMENT  
  
COMPANY DOES NOT DEFINE ITS GOALS IN  
  
DOLLARS AND CENTS HOWEVER.

SCENE 87  
BEACHLER ON-CAM (07:26:35 - 07:26:56)

Now how do we know if we're successful comes largely  
from what the customer thinks. It's subjective, I  
guess you'd say, but we're encouraged by  
the amount of positive feedback and

BEACHLER OFF-CAM

P-9:01:32 continuing or repetitive service that  
we've got with customers.

SCENE 88

BEACHLER ON-CAM (07:27:04 - 07:27:14)

So our definition of success is, Did we  
delight them? Not did I sell 80 million  
dollars.

SCENE 89

NARRATOR:

P-10:01:06

AS IN MANY OTHER COMPANIES, THE SUCCESS OF  
TEAMS IN MANUFACTURING IS BASED ON MUTUAL  
TRUST.

SCENE 90

BEACHLER ON-CAM (07:28:44 - 07:29:16)

If you've been around a machine shop much,  
you know most people have a tool crib  
where they lock up all the tools, and the  
machinists line up out in front and this  
armed guard's back in the tool room and  
you go up there and you sign away your  
first born child to get this cutter to go  
out and do the job. We have an open tool  
crib. We have nobody in that tool crib.  
It's not monitored in that way at all,  
they go in and get what they need.

SCENE 91

NARRATOR:

AFTER JUST OVER TWO YEARS OF TEAM BASED  
IMPROVEMENT, PROCESS EQUIPMENT IS  
INCREASING REVENUES WITH FEWER EMPLOYEES.

SCENE 92

BEACHLER ON-CAM (07:19:14 - 07:19:30)

You'll run into people who don't like this  
kind of thing. They expect to be directed or  
they want to be somebody who's directing.

**FADE TO BLACK**

SCENE 96

NARRATOR:

D-2 35:58

AT DETROIT DIESEL CORPORATION, DETROIT,

D-2 36:27

MICHIGAN, A MANUFACTURER OF LARGE DIESEL

D-1 20:45

ENGINES AND GENERATOR SETS, THE THIRTY-SIX

HUNDRED EMPLOYEES RECEIVE EXTENSIVE TRAINING

IN A WIDE VARIETY OF SUBJECTS.

SCENE 97

BURTON OFF-CAM (00:06:30 - 00:07:24)

D-1 24:45

In the training aspect, in our particular area, in the rod, dome and skirt line, if you ask some of the people still on the floor, they've had approximately 138 hours of training in the last two years.

BURTON ON-CAM

CG: KEITH BURTON

MACHINING SUPERINTENDENT

DETROIT DIESEL CORPORATION

And the training was not the traditional technical type training-they did have a lot of technical training-but they've had training such as Working Together 1, Working Together 2.

D-0 22:35

This is how you work together as a team and identify with the individual the importance of the team and that the team is going to succeed better than the individual.

D-0 24:32

We've had inter-personal communication training, how they can better communicate on getting their points across and also on understanding other people's points.

BURTON ON-CAM

And probably one of the most important was we had a big training session on how to identify and understand change and how to adapt to that change.

SCENE 98

BURTON OFF-CAM (00:08:45 - 00:09:21)

D-0 21:30 We believe that one reason we're so successful at Detroit Diesel is because when we went to the team concept we

D-1 22:34 evolved from the bottom up instead of from top down so that the total ownership came from the supervisor and the employee on the floor versus saying here's how you're going to do it.

D-1 19:32 So we've got the plant problem solving teams out there. We meet primarily on how to reduce costs, how to increase productivity, how to reduce dynamic cycles.

BURTON ON-CAM We do this on a weekly and a daily basis depending on the area. And we always do it on a monthly basis to resolve and see how we measured to what we thought we were going to do at the beginning of the month.

SCENE 99 NARRATOR:

D-1 16:47 IN ADDITION TO ACHIEVING A TEN-FOLD

D-1 24:45 INCREASE IN MARKET SHARE, DETROIT DIESEL

POINTS TO SIGNIFICANT INCREASES IN SHOP FLOOR PRODUCTIVITY.

SCENE 100

BURTON ON-CAM (00:17:43 - 00:18:34)

In the dome, skirt and rod line, where we went into the team concept very, very deep, some of the dramatic results we had out there

GRAPHIC A is we had a 58% cost reduction  
PHOTO 11:07:35 in the making of the parts overall throughout the whole building.

GRAPHIC B We reduced  
PHOTO 11:06:42 the dynamic cycle on the dome line by 98%.

At one time we were up to 79 hours and we got it down to about three hours producing the dome.

GRAPHIC C  
PHOTO 11:07:02

On the rod line we reduced the dynamic cycle almost as dramatically. We were at 129 hours when we started. We've gotten that down to below eight hours which was our goal to get a product within an eight-hour shift,

D-1 29:33

from shift to shift, so we have all the quality problems identified before the next shift comes in.

BURTON ON-CAM

Some other major accomplishments was on the rod line on the change-overs that used to take us about 72 hours and now we can do that in an hour and a half.

**FADE TO BLACK**

SCENE 104

NARRATOR:

RE-RUN ANIMATION  
WITH CHART UPSIDE  
DOWN-ADO?

THE CHANGE FROM TRADITIONAL LEADERSHIP TO A  
TEAM BASED ORGANIZATION WILL BE EASIER IF YOU  
AVOID THESE PITFALLS OF TEAM FORMATION

SCENE 105

CG: PROF. KIM CLARK, Ph.D.  
HARVARD BUSINESS SCHOOL  
CLARK ON-CAM (04:17:25 - 04:18:05)

I would never set up a team and use teams as a way of organizing around important processes unless you were absolutely serious about following through in all the supporting activities that you need to have in place to make those teams work. I really believe that doing teams poorly will make it worse than not doing them at all.

SCENE 106

CLARK ON-CAM (05:04:44 - 05:05:05)

The team is unlikely, at least in most situations, to have all of the assets and resources it needs to accomplish its task. So somehow you have to have a system in place that allows the team to get support. It needs testing, it needs design, it may need financial resources, it may need all sorts of things.

SCENE 107

CLARK OFF-CAM (04:18:28 - 04:18:35)

HP-4 6:38                    You need to have in place people who have  
VIDEO CONT. INTO            the skills to operate as members of a  
SCENE 108                    team.

SCENE 108

CLARK OFF-CAM (04:19:04 - 04:19:55)

CUT AWAY CONT.            It's because the skills you need are very  
FROM LAST SCENE            different than they are to be effective in  
                                  a function. So one is, take a look at  
                                  your folks and make you have people who  
                                  can operate on teams, and if you don't, go  
                                  to work to build them.

CLARK ON-CAM

I think that's a crucial thing. Second thing is you've got to recognize that the functions, if you've been a functional organization, are really almost omni-present in the systems in the organization. Systems of compensation, of information, of planning. And what you're doing with teams, if you're really serious, is you're taking power away from the functions and giving it to the teams. And so the organization has to sign up for that, particularly the guys running the functions.

SCENE 109

CLARK OFF-CAM (04:20:19 - 04:20:47)

HP-3 11:29                    I think a third area is in compensation.  
                                  We've got to confront the fact that  
                                  typically we reward people as individuals,

CLARK ON-CAM                   and when we go to teams, you're telling people, Look, what matters here is not just your individual contribution, that's still important, but what really matters is how you as a team operate, how effectively you accomplish this mission. And somehow you've got to build into your compensation structure system some way of rewarding people for working effectively in teams.

SCENE 110                   NARRATOR:

D-0   21:50                   TEAMS REQUIRE A SUBSTANTIAL INVESTMENT,  
  
BUT ONE THAT CAN PAY SIGNIFICANT  
  
DIVIDENDS.

SCENE 111  
CLARK ON-CAM (05:01:57 - 05:02:59)

Like anything is business when you're creating something new, there's clearly investment involved in setting up teams.

CUT AWAY  
M-6  
6:41-7:02                   You've got to invest in new skills on the part of people, new systems, new support structures, particularly if you're going to try to use teams widely in the organization.

CLARK-ON CAM                   If you're just going to do a special team and set them off to the side and let them do their thing, it's less expensive. But if you're really going to invest in teams, there's clearly cost involved. However, our experience is that investment pays off handsomely in the teams, particularly where the environment is complicated, even turbulent, where the challenge is difficult, where the pressures are intense-teams tend to perform much more effectively than the traditional organization. And by effectively I mean much lower cost, much higher quality, faster. Really better on all the dimensions we care about.

SCENE 112

NARRATOR:

HP-4 19:34

AS COMPANIES BEGIN THE TEAM FORMATION  
PROCESS, THEY OFTEN MAKE THREE COMMON  
MISTAKES.

SCENE 113

CG: PROF. STEVEN WHEELWRIGHT, Ph.D.

HARVARD BUSINESS SCHOOL

WHEELWRIGHT ON-CAM (03:13:03 - 03:14:21)

P-10:11:38-11:48

One is to  
put people on teams who are not equal or  
peers in terms of capability, in terms of  
their status in the organization.

If you get too much difference between team  
members who are on a core team, it's  
impossible for those people who are  
further down the status in the  
organization and capability to really  
stand up and represent what they need to  
represent on the team. A second problem  
that comes up repeatedly in teams is most  
teams are assigned to the project and  
there's a finite link to the project.

D-1 20:36-21:05

And yet most organizations do their staffing  
and career planning and the moves of  
people independent of the duration of the  
project.

So it's very common to have a  
different person, say, representing  
marketing on the front end of a product  
development team than on the back end of  
that same project. Well, it's almost  
impossible to get continuity in terms of  
market perspective, those kinds of things,  
if you're continually changing people.

SCENE 114

NARRATOR:

HP-3 1:22

THE THIRD PITFALL IS EXCESSIVE DIRECTION  
BY MANAGEMENT.

SCENE 115

WHEELWRIGHT ON-CAM (03:14:44 - 03:15:29)

A third thing that I think is an important don't do or avoid is that you really have to avoid giving the team an assignment where you set so many parameters on the assignment that there's no creativity left for them.

P-10:08:46

That is, you've given them a task and said, You have to do it with these resources in this way on this timetable,

and they're likely to look at it and say, That's not our project, that's your project. In every team that we've seen that's been really effective, there's been an early phase in the team where the team basically has to get comfortable and take ownership of what the task is, what the goals are, and that means they have to have enough leeway in order to make that work.

SCENE 116

NARRATOR:

D-1 20:23

DESPITE A MIXED RECORD OF SUCCESS  
AND FAILURE, TEAMS ARE NOW A  
PERMANENT FEATURE OF THE  
MANUFACTURING LANDSCAPE.

SCENE 117

WHEELWRIGHT ON-CAM (04:03:13 - 04:14:11)

My own sense is that teams are here to stay. That is, we're going to see a wider variety of teams. We're going to learn more about how to make each of those different kinds of teams work effectively and we'll see people no longer talk about teams in a generic sense, but they'll actually begin to talk much more about specific kinds of teams. I think that as companies learn how to use teams more effectively-one of things we've discovered in people like Chaparral Steel and some others who use teams for

virtually everything they do-that in fact it begins to change the way the organization works.

MUSIC UNDER

Usually people think of teams as the exception to how you normally run the business. What we find is that people who get very good at teams decide that it ought to be the rule of how they run the business. So the vast majority of the tasks that the business tackles get tackled through teams rather than being tackled by the functions.