Manpower/Bartech Focus Group
Oakland Center for Social Research

Introduction

On Tuesday, May 23, automotive industry representatives attended a focus group facilitated by the Oakland Center for Social Research. The focus group was initiated by Manpower and Bartech Personnel Services as part of a joint project to transition dislocated aerospace employees to the automotive industry. Discussion questions focused on the training such employees would require to make the transition smoothly and efficiently.

Methodology

Focus group participants included eleven employees from Ford and Saturn, the two organizations with which Manpower and Bartech plan to place the relocated aerospace employees. Staff members from the Oakland Center for Social Research facilitated the session, focusing the discussion around the following issues:

SKILLS

1. What skills should the candidate possess to make the transition from aerospace to automotive? industry

2. What does a good engineering or design person need to assimilate smoothly into the automotive industry?

3. (For potential employers) What, realistically, do you want these people to know and be able to do on their first day of employment in your area?

4. (For those who have personally made the transition from aerospace to automotive) What was your transition like? How could it have been eased? Given your experience, where do you think problems are likely to crop up? Did any part of the transition do more or less smoothly than you had expected?

KNOWLEDGE

1. How would you order the importance of the following issues in the proposed training program?

    ●Differences in nomenclature
    ●Standards:
           Safety
           Government
           Specifications and requirements
           Drafting standards

Symbols
Quality
- Ergonomics
- Styling
- On the job component
- Electronic overview
- Future of the industry

2. Which of the issues we have discussed would be the top two on your list? Why?

3. Which of these issues is of least importance? Why?

4. What do you see as the next steps in this process?

5. Based on what you've heard today, how committed are you to work on bringing trained aerospace engineers in to fill openings within your company?

Results

The focus group began with the moderator's introduction. In her opening remarks, she set the parameters of the discussion by informing participants of the goals and objectives of the proposed training program. The discussion then began with participants sharing information about the skills necessary for the transition from aerospace to automotive.

Employment Requirements

From the comments of participants, it seems that the skills required for a successful transition vary depending on the type of position in the automotive industry. A participant from an engineering background felt that the successful candidate should already possess an BSME (Bachelor of Science/Mechanical Engineering), as well as at least two years' technical engineering experience. He also mentioned experience in the core areas of the program, teamwork skills, and the ability to communicate effectively with both internal and external customers as important prerequisites. The design perspective emphasizes a different set of skills necessary for the transition. A high school diploma or an associate degree is required, as is prior experience with CAD systems, a background in drafting, and 5-10 years' experience. Finally, those participants with a manufacturing perspective emphasize the importance of prior experience, noting that trainees with extensive aerospace backgrounds will already possess many of the skills needed to transition successfully into the automotive industry. One participant from a manufacturing background predicted that most of the trainees would already have 60-80% of the skills required in the automotive industry, and that the training program would only need to cover the remaining 20-40%.

Proposed Training Program

The participants who brought an engineering perspective to the group felt that the focus

of the proposed training program should be the paradigm shift involved in the transition. They spoke of the importance of conveying to trainees a sense of the differences between the two industries, citing specifically the economics of high volume/low cost vs low volume/high cost manufacturing, the differences in the materials involved in the manufacturing process, and the differences in defense contracting work vs the non-defense competitive market.

A second perspective came from the participants representing automotive design. While the paradigm shift is considered important, the design representatives feel that the program should also incorporate a vehicle overview component. Specifically, trainees should be instructed in basic packaging, and receive tours of the test tracks and the design studios. Those involved in manufacturing agreed that an overview of the paradigm shift would be appropriate, and added that tours of assembly and stamping plants might prove useful in illustrating the differences between the aerospace and automotive industries.

One participant mentioned that Manpower/Bartech might do well to consider more than one curriculum as it appears that customer needs could vary significantly. Those involved in engineering have different training needs than others involved in design or manufacturing. For example, a designer is likely to need employees with expertise in software analysis tools and modelling. Product engineers are more likely to need people with experience in the engineering and testing of parts. Those in manufacturing, on the other hand, are interested in experience in stamping, stamping tools, and polymer production.

Skills

While all participants agreed that the program should include an overview of the industry including the paradigm shift from aerospace to automotive, there was less agreement on which specific skills should be incorporated into the training. During this part of the discussion, the moderator reminded participants that the proposed program is ten weeks long and is not intended to be comprehensive, but rather is meant to facilitate the transition from one industry to the other. The engineers felt that while ten weeks would not be long enough for any training beyond a general overview of the industry, the program would still be valuable. The designers noted that while the trainees will already have many important skills, they will need polishing. The training program, from their perspective, could provide an industry overview and begin the work needed to bring trainees up to speed in essential skill areas. The manufacturers felt the general overview, while important, should be emphasized less than the on-the-job component. One participant noted that those making the transition to manufacturing positions already have the advanced skills necessary for success, but need practical experience to learn the details of the automotive industry.

When asked to number a list of skills in order of importance to the proposed training program, all participants stated that a general overview of the industry, including the paradigm shift from aerospace to automotive, should be the first program objective. Other top priority skills and training issues included:

- Nomenclature
- Acronyms

- Standards:
    - Customer
    - Economic
    - Quality
    - Product development
- Vehicle Evaluation
- Materials and Manufacturing Processes
- Timing Initiatives
- Reliability Methods
- Probability and Statistics
- SPC
- CATIA
- Economics of high volume
- Auto Design/Vehicle Architecture
- Manual drafting
- Stamping/Tool & Die making

As the list grew, the participants acknowledged that covering all the items in a ten week course would be unrealistic. Several suggested that the "core" courses focus on the issues related to the paradigm shift, such as timing, manufacturing processes, and the economics of high volume. Most agreed that these elements would be of use to trainees from all three areas.

Conclusion

By the end of the discussion, most participants agreed that while those in engineering, design, and manufacturing are likely to require different OJT components, the proposed training program's overview of the automotive industry would be appropriate for all trainees. Participants were generally supportive of the proposal. The following comments reflect some of the concerns voiced regarding the need for training, as well as some of the positive statements made about the possibilities for program success.

Comments focused on the need to convey the paradigm shift include:

"In aerospace, they just don't have the sense of urgency in timing that you find in automotive. They are used to three to four year development programs."

"I'll give you an example of the types of things they will need to learn. In aerospace, their volume is so small that they don't care what their scrap rate is. In automotive, we watch our scrap rates extremely closely because we are so high volume."

"In my experience with people from the aerospace industry, one of the hardest things to change (when bringing them into automotive) is what I'll call defense industry vs non-defense industry thinking...the guys that have come to us are used to military-based thinking, where they don't have to worry about business for the next twenty years because they've won a contract. The first thing we have to get across to them is that the world they are stepping into is an economically different world."

"A lot of these guys are used to testing things to put two satellites into space. When I say we need to test something to predict the reliability of 300,000 cars, they don't know where to start."

Other comments were directed at the similarities which exist between the two industries:

(From a participant who transferred from aerospace to automotive)"My transition was remarkably smooth, given the responsibilities that I had then and that I have now. I'm not involved with transmission design, so it wasn't a problem. My background is primarily in testing and instrumentation calibration, and my experience has been very useful in the facility where I work because they are lacking people with these skills."

"I would think that these types of skills (from aerospace) would be needed in automotive. For example, emissions standards and regulations keep changing, and it seems there will be a continuing need for people who understand calibration and emissions. Although it may be different for jet aircraft, they still have people who study engine performance."

"Metal stampings is another example that carries over from aerospace to automotive. While their shapes are somewhat different from ours, some of the basics of what makes a stamping tool are the same."

I. INTRODUCTION

A. First of all, I want to thank all of you for coming this morning. The team responsible for this project appreciates your willingness to get involved. I also think you'll enjoy this focus group. How many of you have ever participated in a focus group discussion before? For those that haven't, this type of market research means just what it says. We are a group and we are going to "focus" our discussion on a specific subject.

As you may or may not know, there is a shortage of design and engineering personnel within the automotive industry. That problem has both a short term and a long term fix. Long term solutions include working directly with colleges and universities to educate and train students as they enter. Short term solutions are the reason we're here today.

Most of the traditional methods of hiring have already been utilized, that is, hiring from competitors and/or calling back laid off employees. Hiring methods have to be expanded now to look at technical people in other industries.

The pilot program we're going to talk about today is aiming to do that. Capitalizing on the budget cuts affecting the defense sector of the economy, specifically aerospace, this program will provide the tools and the knowledge necessary for an aerospace engineer to successfully transition into the automotive industry.

This is not a simple process nor is it one that someone dreamed up the day before yesterday. Manpower and Bartech have formed a partnership to develop solutions to solving the problem as I have just identified it. Transitioning engineers into automotive requires a three phase process. Today we are ONLY going to talk about Phase II - the actual training program. But I want you to know that work on Phase I has already been started. A stringent candidate screening program has been underway since March. Candidates who ultimately reach Phase II Training will want to be there.

Let me tell you what Phase II Training will not be and then we'll get into our discussion so that you can tell me what it should be, O.K.? It is not the intention to teach specific skills to these professionals but rather to provide them with an overview of the automotive industry. It will involve both classroom training and on-the-job training.

I. **INTRODUCTION (CONT'D)**

A. Now that I've talked way too much I'd like to listen to what your thoughts are on the subject but before we get into a nitty-gritty discussion I'd like to go around the room and have everyone introduce themselves. I'll start. (First names are fine, if you prefer.) [I'LL INTRODUCE MYSELF AS WELL AS RECOGNIZE THE PRESENCE OF THE PEOPLE SITTING AROUND THE ROOM, THEN THE PARTICIPANTS WILL BEGIN]

II. **SKILLS**

A. What skills should the candidate possess to make the transition from aerospace to auto?

B. Let me ask that another way, what does a good engineering or design person need to assimilate smoothly into the automotive industry?

C. Those of you who are potential employers of these engineers, realistically what do you want these people to know and be able to do on their first day of employment in your area?

D. Those couple of you here who have made the transition from aerospace to automotive, what could have been done differently? What would have eased your transition? Where are the potholes likely to crop up? What went smoother than anticipated?

III. **KNOWLEDGE**

A. Earlier I asked what these people would have to know to make the transition and we mentioned [READ LIST]. I'd like to throw out a few other ideas that this team thought of and see what you think of them.

1. [REVIEW ITEMS ON FAXED LIST ONE BY ONE AND DISCUSS, UPON COMPLETION ASK:]

Now, I'd like you take a couple of minutes and rank order all these items with 1 being most important, 2 second most important to you, etc.

2. O.K., what are the top two items on your lists? Tell me why.

3. What's last on your list? Why is that least important to you?

Wrap-up/Closing Comments:
- Commitment/Statement of interest in hiring program trainees -

A.C.S. Function Codes

Instruction

1110...Fine Arts / Humanities
1120...Communications
1130...Social Sciences
1140...Mathematics
1150...Sciences
1160...Physical Education
1170...Health Education

1210...Business
1220...Computer Science
1230...Secretarial / Office
1240...Public Service
1250...Media Production Technology
1260...Personal Service Trades

1310...Agricultural Technology
1320...Design Technology
1330...Mechanical Trade Technology
1340...Construction Trade Technology
1350...Electrical / Electronic Technology
1360...Transportation / Equipment Operation
1370...Apprentice Instruction

1410...Nursing
1420...Dental Technology
1430...Diagnostic Technology
1440...Therapeutic Technology
1450...Other Health Technology
1460...Health Related Science

1510...Traditional Classroom
1520...Learning Labs
1530...Career Guidance
1540...Tutorial Instruction

1610...Human Development
1620...Personal Interest

Public Service

3100...Health Care Services
3200...Community Services
3300...Public Broadcasting

Instructional Support

4100...Libraries
4200...Museums and Galleries
4300...Instructional Media
4400...Instructional Administration
4500...Instructional Facility Rental

Student Services

5100...Student Service Administration
5200...Social / Cultural Development
5300...Counseling and Guidance
5400...Financial Aid and Placement
5500...Auxiliary Services
5600...Intercollegiate Athletics
5700...Recruitment, Admissions, Records
5800...Student Medical Services

Institutional Administration

6100...Executive Management
6200...General Administration
6300...Public Relations

Plant Operations

7100...Physical Plant Administration
7200...Buildings and Grounds
7300...Custodial Services
7400...Energy Services
7500...Health and Safety Services

Independent Operations

9100...Current Funds
9200...Non-Current Funds

BUS 66A

June 5, 1995

Kent Stastky
Executive Vice President
Bartech Personnel Services
17199 Laurel Park Drive, STE 224
Livonia, MI 48152-2679

Dear Mr. Stastky:

The enclosed report summarizes the focus group of May 23. As we discussed, the Oakland Center for Social Research (OCSR) staff taped the session in order to capture the level of detail you will need in taking the next steps to develop the "Aerospace to Automotive Recruiting/Retraining Program."

After hearing Donna's impressions at the close of the session and reviewing the tapes of the discussion, I am confident that the information included in the report accurately represents the tone and content of the focus group. We at the OCSR have enjoyed working with Manpower and Bartech on this project, and wish you the best of luck in moving forward with the program.

Should you have further questions, please do not hesitate to contact me at (810) 471-7746. We have appreciated the opportunity to facilitate this focus group, and hope that you will keep our services in mind for future research needs.

Sincerely,

Martin A. Orlowski, Director
Oakland Center for Social Research

enc: Focus Group Summary Report

MAO/ch

June 5, 1995

Pam Berklich
President, Manpower Automotive
24901 Northwestern Highway
Suite 717
Southfield, MI 48075

Dear Ms. Berklich:

The enclosed report summarizes the focus group of May 23. As we discussed, the Oakland Center for Social Research (OCSR) staff taped the session in order to capture the level of detail you will need in taking the next steps to develop the "Aerospace to Automotive Recruiting/Retraining Program."

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Martin A. Orlowski, Director
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