2015 Tour of Manufacturing

Survey of Tour Hosts and Participants

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Introduction

In fall 2015, the 360 Center of Excellence and its partners coordinated over 80 manufacturing businesses and five colleges across Minnesota to provide tours of their facilities for students and educators, job seekers, other manufacturers, and the general public. The official dates for the event, called the Dream It. Do It. Minnesota Statewide Tour of Manufacturing, were October 1 to October 10, 2015, however, tours occurred from October through early November. To help understand the implementation and impact of the tours, Wilder Research administered a paper-based survey to tour participants (referred to throughout the report as "participants"), as well as a web-based survey for the manufacturing businesses that hosted the tours (referred to as "hosts"). This report highlights findings from both surveys. For additional data, see the attached tables in the Appendix.

Survey methodology

Wilder and 360 staff asked sites to distribute self-administered, paper questionnaires to participants, as was done in recent years. Staff from each host distributed copies of the survey to participants and returned completed surveys to Wilder Research. A total of 239 people—both youth and adults—completed the survey; the number of completed forms has fluctuated since the survey began in 2012.

Number of completed participant surveys, by year

	2012	2013	2014	2015
# of completed participant surveys	117*	28*	391	239

Note: Asterisk indicates online survey administration. During 2014 and 2015, the survey was administered in-person by paper.

For the host survey, Wilder Research emailed a survey link to 91 business representatives with an available email address. Overall, 58 people completed the survey for a response rate of 64 percent.

Findings

Learning about the Tour of Manufacturing

Participants were most likely to learn about the Tour of Manufacturing through a newspaper (37%), followed by school (23%) and family members or friends (13%). Roughly one in ten participants had learned about the Tour through their local Chamber of Commerce (10%), the radio (8%), or the Tour of Manufacturing website (7%); other means for learning about the Tour, such as social media, were less common.

Hosts most often heard about the Tour of Manufacturing through a local Chamber of Commerce (27%) or an email they received (21%). Fewer had heard about the Tour through a manufacturing association (10%). One-third (33%) of respondents heard about the Tour of Manufacturing through other means, such as another person, local media, or a local business.

Preparing businesses for their tours

To help businesses prepare for the Tour of Manufacturing, 360 staff sent hosts a variety of marketing and informational materials intended to increase participation. Of these materials, the hosts most often used their company listing on the Tour of Manufacturing website (59%), followed by a press release template (37%), and a letter to schools (26%).

The majority of hosts (69%) reported that their tours were open to the public, although many businesses focused their efforts on schools (31% said their tour was exclusively for schools). Nearly half (45%) of respondents said that the primary audience for their tours was schools, and 31 percent said their primary audience was both schools and the community at large. Only 22 percent said that the community was their primary audience.

Participation in the Tour of Manufacturing

Based on estimates provided by 50 host respondents, Tour of Manufacturing participation ranged from 0 to 347 people with an average of 84 participants per site. The total estimated number of participants was 4,055 (Figure 1). It should be noted that Tour of Manufacturing hosts could estimate the number of attendees however they chose; therefore the method for estimation across sites is inconsistent. The most common methods were a sign-in sheet and a simple headcount of participants.

1. Estimated number of visitors (N=50)

	N
Minimum	0
Maximum	347
Average (per respondent site)	84
Total (all respondent sites)	4,055

Note: Three sites reported fewer than 10 visitors, including two that had no visitors.

At the tours, visitors were asked to provide their demographic information; participants tended to be men (67%), and over 45 years old (51%; Figure 2).

2. Participant respondent demographics (N=224)

	N	%
Gender		
Male	150	67%
Female	74	33%
Age		
Under 18 years old	33	15%
18-25 years old	30	13%
26-45 years old	46	21%
46 and older	115	51%

Satisfaction with the Tour of Manufacturing

Overall, both participants and hosts of the 2015 Tour of Manufacturing reported high levels of satisfaction. Hosts were particularly pleased with the engagement of participants and the opportunity to build awareness of manufacturing careers.

- Nearly all of the participants surveyed (99%) were at least satisfied with their experience at the Tour of Manufacturing, and 86% reported they were very satisfied.
- Most of the surveyed hosts (90%) reported that their participation in the Tour of Manufacturing was at least somewhat worthwhile and 92% reported that they plan to participate again (65% "Yes, certainly" and 27% "Yes, maybe").

Attitudes toward manufacturing

The 2015 participant survey focused on the "perceptions of manufacturing" questions developed in 2013, which ask participants to rate their interest in science, technology, engineering and math (STEM) and manufacturing careers, as well as their awareness and perceptions of those careers. Respondents were asked to recall their opinions of these factors before they attended the Tour of Manufacturing, as well as comment on their opinions after attending the event. In all areas, participant attitudes regarding STEM and manufacturing were higher after the Tour of Manufacturing.

Participants' perceptions of manufacturing careers saw the greatest increase of any other pre-post survey question. Whereas 51 percent of respondents thought manufacturing careers were good before the Tour of Manufacturing, 80 percent felt this away after attending the event (Figure 3). Overall, 34 percent of respondents had a more positive perception of manufacturing careers (this means movement from any lower category into a higher one), while another 53 percent maintained their already high perceptions of manufacturing careers (Figure 4).

3. Perceptions of manufacturing careers (pre- and post-Tour of Manufacturing)

Perceptions of manufacturing careers	Before Tour (N=222)	After Tour (N=222)	Change
I thought/think they were/are good	112 (51%)	178 (80%)	+66 people
I thought/think they were/are just OK	66 (30%)	31 (14%)	-35 people
I didn't/don't think they were/are good	15 (7%)	1 (1%)	-14 people
I didn't/don't think about them	19 (9%)	7 (3%)	-12 people
I'm not sure	10 (5%)	5 (2%)	-5 people

4. Change in perceptions of manufacturing careers (N=211)

Positive perceptions of manufacturing careers	N	%
Increased – more positive	72	34%
Maintained high perceptions	112	53%
Maintained moderate or low perceptions	26	12%
Decreased – less positive	1	1%

Note: "Maintained high perceptions" means that the participant's interest level was "good" both before and after the Tour of Manufacturing. "Maintained moderate or low perceptions" means that participant interest level was either "okay", "not good" or "didn't think about it" both before and after the Tour of Manufacturing.

In general, respondents' awareness of and interest in manufacturing careers saw greater increases than interest in STEM.

Changes in opinions also differed by demographic group.

- Participants age 25 and under were more likely to increase their awareness of and interest in manufacturing than older participants. These differences are statistically significant. Participants between 18 and 25 years old were the most likely to increase their interest in (53%) and awareness of (63%) manufacturing careers as a result of the Tour of Manufacturing; of youth ages 18 and under, 48 percent increased their interest in manufacturing, and 55 percent increased their awareness of manufacturing careers. In general, older adults were less likely to change their interest in and awareness of manufacturing careers.
- In all questions gauging participants' perceptions of manufacturing before and after the Tour of Manufacturing, women were more likely to improve their opinion than men. Differences in gender (related to interest in manufacturing careers) are statistically significant. Men were more likely to have a high opinion of manufacturing prior to the Tour, but the Tour is helping narrow this gender gap.
- Women were most likely to improve their perceptions of manufacturing careers (43% increased from a lower category to a higher one), while men were most likely to increase their awareness of manufacturing careers (34%).

Participants were asked to select words they felt best described manufacturing careers from a list of five positive and five negative adjectives (Figure 5). All five positive adjectives were selected more often than any of the negative adjectives. The most common selections were "creative" (50%), "advanced" (49%), and "modern" (41%).

5. Descriptions of manufacturing careers (N=223)

Words that best describe manufacturing careers	N	%
Creative	111	50%
Advanced	102	46%
Modern	91	41%
Exciting	76	34%
Fun	73	33%
Noisy	64	29%
Hard	50	22%
Dirty	29	13%
Dangerous	18	8%
Dark	3	1%

Note: Percentages equal more than 100% because respondents were able to give multiple responses.

Experiences of the Tour of Manufacturing hosts

Tour of Manufacturing hosts were generally pleased with the level of engagement shown by participants and greatly valued the opportunity to build awareness of and interest in manufacturing careers. Manufacturers found the event to be valuable in several ways.

- The *most valuable* aspects (offered by respondents in an open-ended question) were increased awareness for their business (37%) and youth being able to experience the field of manufacturing (30%).
- When asked about five specific items related to the value of the Tour of Manufacturing, a majority of respondents reported that building awareness of or interest in manufacturing as a career option (69%) was a very valuable component of the event. A little more than half (54%) reported that marketing or building awareness of their business to the general public was very valuable, and 29 percent reported that identifying potential employees was a very valuable component of the Tour of Manufacturing.
- When asked about three items related to the success of the Tour of Manufacturing, nearly two-thirds (63%) said that the engagement of Tour of Manufacturing participants was very successful this year, 44 percent reported they were very successful in the number of participants, and 30 percent reported that they were very successful in the type of people they got to attend their tour.
- The *most successful* aspects of the Tour of Manufacturing, according to hosts, were raising awareness about their business (28%) and student participation during the tours (20%).

There were also some challenges and suggestions for support reported by the Tour of Manufacturing hosts.

- In an open-ended question, the biggest challenge reported by hosts was a lack of participants attending their tour (26%). In a closed-ended question, 23 percent of hosts said that providing staff time to lead the tours was very or somewhat challenging (few hosts reported having challenges with the other items in the question).
- In terms of additional support, hosts mentioned wanting more help with marketing (31%), support from local schools (19%), and having more local businesses participate (13%).

Conclusion

Overall, the findings from the Tour of Manufacturing surveys are positive. Participants had a high level of satisfaction with the tours, indicating that they increased their awareness of and interest in manufacturing careers as well as their positive perceptions of those careers. Younger respondents were more likely to increase their perceptions about manufacturing careers than older participants, and women were more likely than men to increase their perceptions of manufacturing careers (this was true on all "change" questions asked).

Hosts were also generally pleased with the event and appreciated the resulting public awareness and participant engagement. That being said, the most common challenges reported were a lack of participants at some host sites and providing staff time to lead the tours. Several hosts also mentioned that they would like help with marketing materials and increasing involvement in their tour (both in terms attendance and local partnerships). Given that one of the most valuable and successful aspects of the Tour for hosts is building awareness of their business, 360 staff may want to consider providing additional marketing and networking assistance to businesses for the 2016 Tour of Manufacturing in order to help increase attendance.

Data tables

Participant survey

P1. How participants heard about the Tour (N=238)

	N	%
Newspaper	89	37%
School (e.g., fellow student or teacher)	54	23%
Family member or friend	31	13%
Chamber of Commerce	24	10%
Radio	20	8%
Tour of Manufacturing website	17	7%
Manufacturer	6	3%
Facebook	6	3%
Work (e.g., employer or another employee)	5	2%
Signs or other marketing in town	2	1%
Twitter	0	0%
Other (please specify)	33	14%
Other	18	55%
Magazine	5	15%
Central Minnesota Manufacturers Association	3	9%
Website	3	9%
Greater Mankato Growth	4	12%

Note: Percentages may equal more than 100% as respondents were able to give multiple responses.

P2. Overall satisfaction with the Tour (N=236)

	N	%
Very satisfied	202	86%
Satisfied	32	14%
Dissatisfied	0	0%
Very dissatisfied	2	1%

P3. Change in interest in STEM (N=213)

	N	%
Increased	31	15%
Maintained high interest	115	54%
Maintained moderate or low interest	61	29%
Decreased	6	3%

Note: "Maintained high interest" means that the participant's interest level was "A lot" both before and after the Tour of Manufacturing. "Maintained moderate or low interest" means the participant's interest level was either "some", "very little" or "not at all" both before and after the Tour of Manufacturing.

P4. Change in interest in manufacturing careers (N=205)

	N	%
Increased	61	30%
Maintained high interest	61	30%
Maintained moderate or low interest	78	38%
Decreased	5	2%

Note: "Maintained high interest" means that the participant's interest level was "A lot" both before and after the Tour of Manufacturing. "Maintained moderate or low interest" means the participant's interest level was either "some", "very little" or "not at all" both before and after the Tour of Manufacturing.

P5. Change in awareness of careers in manufacturing (N=209)

	N	%
Increased	72	34%
Maintained high awareness	69	33%
Maintained moderate or low awareness	63	30%
Decreased	5	2%

Note: "Maintained high awareness" means that the participant's awareness level was "A lot" both before and after the Tour of Manufacturing. "Maintained moderate or low awareness" means the participant's awareness level was either "some", "very little" or "not at all" both before and after the Tour of Manufacturing.

P6. Change in perceptions of manufacturing careers (N=211)

	N	%
Increased	72	34%
Maintain high positive perception	112	53%
Maintained moderate or low perception	26	12%
Decreased	1	1%

Note: "Maintained high positive perception" means that the participant's perception level was "good" both before and after the Tour of Manufacturing. "Maintained moderate or low perception" means the participant perception level was either "okay", "not good" or "didn't think about it" both before and after the Tour of Manufacturing.

P7. Interest in STEM (pre- and post-Tour)

Interested in science, technology, engineering, or math	Before Tour (N=220)	After Tour (N=213)	Change
A lot	120 (55%)	136 (64%)	+16 people
Some	76 (35%)	63 (30%)	-13 people
Very little	20 (9%)	9 (4%)	-11 people
Not at all	4 (2%)	5 (2%)	+1 people

P8. Interest in manufacturing careers (pre- and post-Tour)

Interested in manufacturing careers	Before Tour (N=210)	After Tour (N=208)	Change
A lot	63 (30%)	101 (49%)	+38 people
Some	79 (38%)	71 (34%)	-8 people
Very little	43 (21%)	14 (7%)	-29 people
Not at all	25 (12%)	22 (11%)	-3 people

P9. Awareness of careers in manufacturing (pre- and post-Tour)

Aware of careers in manufacturing	Before Tour (N=213)	After Tour (N=210)	Change
A lot	71 (33%)	125 (60%)	+54 people
Some	95 (45%)	63 (30%)	-32 people
Very little	33 (16%)	10 (5%)	-23 people
Not at all	14 (7%)	12 (6%)	-2 people

P10. Perceptions of manufacturing careers (pre- and post-Tour)

Perceptions of manufacturing careers	Before Tour (N=222)	After Tour (N=222)	Change
I thought/think they were/are good	112 (51%)	178 (80%)	+66 people
I thought/think they were/are just OK	66 (30%)	31 (14%)	-35 people
I didn't/don't think they were/are good	15 (7%)	1 (1%)	-14 people
I didn't/don't think about them	19 (9%)	7 (3%)	-12 people
I'm not sure	10 (5%)	5 (2%)	-5 people

P11. Adjectives for manufacturing careers, open-ended (N=167)

	N	%
Hard-working/motivated/dedicated	35	23%
Interesting/fun/exciting	22	15%
Smart/educated	15	10%
Talented/skilled	15	10%
Highly paid/good job/career	10	7%
Creative/inventive/problem solver	7	5%
Technological/good at math/science/programming/designing	6	4%
Precision/detailed	3	2%
Challenging/difficult/dangerous/intense	3	2%
Essential/important/needed/critical	2	1%
Hands-on/builder/welder/constructing things	1	1%
Someone I know (e.g., dad, mom, uncle, aunt)	1	1%
Other	33	22%

Note: Percentages may equal more than 100% as respondents were able to give multiple responses; Open-ended responses to the questions were coded into the above categories.

P12. Descriptions of manufacturing careers (N=223)

Words that best describe manufacturing careers	N	%
Creative	111	50%
Advanced	102	46%
Modern	91	41%
Exciting	76	34%
Fun	73	33%
Noisy	64	29%
Hard	50	22%
Dirty	29	13%
Dangerous	18	8%
Dark	3	1%

Note: Percentages may equal more than 100% as respondents were able to give multiple responses.

P13. Gender (N=239)

	N	%
Male	150	67%
Female	74	33%
Missing	15	6%

P14. Age (N=224)

	N	%
Under 18	33	15%
18-25 years old	30	13%
26-45 years old	46	21%
46 and older	115	51%

Cross-tabs by age

P15. Interest in STEM, by age, pre-Tour

		Under 18 (N=33)	18-25 (N=29)	26-45 (N=44)	46 and older (N=102)
A lot (N=114)	%	49%	45%	66%	55%
	N	16	13	29	56
Some (N=71)	%	39%	41%	30%	32%
	N	13	12	13	33
Very little (N=19)	%	12%	14%	5%	9%
	N	4	4	2	9
Not at all (N=4)	%	0%	0%	0%	4%
	N	0	0	0	4

P16. Interest in STEM, by age, post-Tour

		Under 18 (N=33)	18-25 (N=29)	26-45 (N=44)	46 and older (N=98)
A lot (N=131)	%	61%	48%	77%	64%
	N	20	14	34	63
Some (N=60)	%	27%	52%	18%	29%
	N	9	15	8	28
Very little (N=8)	%	9%	0%	2%	4%
	N	3	0	1	4
Not at all (N=5)	%	3%	0%	2%	3%
	N	1	0	1	3

P17. Overall change in interest in STEM, by age

		Under 18 (N=33)	18-25 (N=29)	26-45 (N=44)	46 and older (N=98)
Increased (N=31)	%	15%	21%	11%	15%
	N	5	6	5	15
Maintained high interest (N=110)	%	49%	41%	66%	54%
	N	16	12	29	53
Maintained moderate or low interest (N=57)	%	30%	35%	21%	29%
	N	10	10	9	28
Decreased (N=6)	%	6%	3%	2%	2%
	N	2	1	1	2

Note: "Maintained high interest" means that the participant's interest level was "A lot" both before and after the Tour of Manufacturing. "Maintained moderate or low interest" means the participant's interest level was either "some", "very little" or "not at all" both before and after the Tour of Manufacturing.

P18. Interest in manufacturing careers, by age, pre-Tour

		Under 18 (N=33)	18-25 (N=30)	26-45 (N=46)	46 and older (N=92)
A lot (N=61)	%	15%	37%	46%	26%
	N	5	11	21	24
Some (N=75)	%	49%	30%	41%	34%
	N	16	9	19	31
Very little (N=43)	%	33%	27%	9%	22%
	N	11	8	4	20
Not at all (N=22)	%	3%	7%	4%	19%
	N	1	2	2	17

P19. Interest in manufacturing careers, by age, post-Tour

		Under 18 (N=33)	18-25 (N=30)	26-45 (N=45)	46 and older (N=92)
A lot (N=99)	%	39%	73%	53%	44%
	N	13	22	24	40
Some (N=67)	%	46%	20%	40%	30%
	N	15	6	18	28
Very little (N=14)	%	12%	3%	2%	9%
	N	4	1	1	8
Not at all (N=20)	%	3%	3%	4%	17%
	N	1	1	2	16

P20. Change in interest in manufacturing careers, by age*

		Under 18 (N=33)	18-25 (N=30)	26-45 (N=45)	46 and older (N=89)
Increased (N=61)	%	49%	53%	13%	26%
	N	16	16	6	23
Maintained high interest (N=59)	%	12%	37%	47%	26%
	N	4	11	21	23
Maintained moderate or low interest (N=72)	%	36%	10%	40%	44%
	N	12	3	18	39
Decreased (N=5)	%	3%	0%	0%	5%
	N	1	0	0	4

Note: "Maintained high interest" means that the participant's interest level was "A lot" both before and after the Tour of Manufacturing. "Maintained moderate or low interest" means the participant's interest level was either "some", "very little" or "not at all" both before and after the Tour of Manufacturing.

*=The relationship between age and the change in interest in manufacturing careers is not due to chance and is statistically significant.

P21. Awareness of careers in manufacturing, by age, pre-Tour

		Under 18 (N=33)	18-25 (N=30)	26-45 (N=45)	46 and older (N=97)
A lot (N=69)	%	15%	20%	51%	36%
	N	5	6	23	35
Some (N=92)	%	52%	53%	40%	42%
	N	17	16	18	41
Very little (N=31)	%	33%	20%	7%	11%
	N	11	6	3	11
Not at all (N=13)	%	0%	7%	2%	10%
	N	0	2	1	10

P22. Awareness of careers in manufacturing, by age, post-Tour

		Under 18 (N=33)	18-25 (N=30)	26-45 (N=46)	46 and older (N=93)
A lot (N=122)	%	55%	73%	67%	55%
	N	18	22	31	51
Some (N=61)	%	36%	17%	30%	32%
	N	12	5	14	30
Very little (N=8)	%	9%	7%	0%	3%
	N	3	2	0	3
Not at all (N=11)	%	0%	3%	2%	10%
	N	0	1	1	9

P23. Change in awareness of careers in manufacturing, by age*

		Under 18 (N=33)	18-25 (N=30)	26-45 (N=45)	46 and older (N=93)
Increased (N=71)	%	54%	63%	24%	25%
	N	18	19	11	23
Maintained high awareness (N=67)	%	15%	20%	51%	36%
	N	5	6	23	33
Maintained moderate or low awareness (N=58)	%	27%	17%	24%	36%
	N	9	5	11	33
Decreased (N=5)	%	3%	0%	0%	4%
	N	1	0	0	4

Note: "Maintained high awareness" means that the participant's awareness level was "A lot" both before and after the Tour of Manufacturing. "Maintained moderate or low awareness" means the participant's awareness level was either "some", "very little" or "not at all" both before and after the Tour of Manufacturing.

*=The relationship between age and the change in awareness in manufacturing careers is not due to chance and is statistically significant

P24. Perceptions of manufacturing careers, by age, pre-Tour

		Under 18 (N=33)	18-25 (N=30)	26-45 (N=46)	46 and older (N=109)
I thought they were good (N=110)	%	15%	43%	67%	56%
	N	5	13	31	61
I thought they were just ok (N=64)	%	46%	20%	26%	28%
	N	15	6	12	31
I didn't think they were good (N=15)	%	9%	27%	2%	3%
	N	3	8	1	3
I didn't think about them (N=19)	%	15%	7%	2%	10%
	N	5	2	1	11
I am not sure (N=10)	%	15%	3%	2%	3%
	N	5	1	1	3

P25. Perceptions of manufacturing careers, by age, post-Tour

		Under 18 (N=33)	18-25 (N=30)	26-45 (N=46)	46 and older (N=109)
I thought they were good (N=174)	%	61%	77%	96%	80%
	N	20	23	44	87
I thought they were just ok (N=31)	%	33%	17%	2%	13%
	N	11	5	1	14
I didn't think they were good (N=1)	%	0%	3%	0%	0%
	N	0	1	0	0
I didn't think about them (N=7)	%	3%	3%	0%	5%
	N	1	1	0	5
I am not sure (N=5)	%	3%	0%	2%	3%
	N	1	0	1	3

P26. Change in perceptions of manufacturing careers, by age*

		Under 18 (N=28)	18-25 (N=29)	26-45 (N=45)	46 and older (N=105)
Increased (N=70)	%	61%	45%	29%	26%
	N	17	13	13	27
Maintained high perception- (N=110)	%	18%	45%	69%	58%
	N	5	13	31	61
Maintained moderate or low perception- (N=26)	%	18%	10%	2%	16%
	N	5	3	1	17
Decreased (N=1)	%	4%	0%	0%	0%
	N	1	0	0	0

Note: "Maintained high perception" means that the participant's perception level was "good" both before and after the Tour of Manufacturing. "Maintained moderate or low perception" means the participant perception level was either "okay", "not good" or "didn't think about it" both before and after the Tour of Manufacturing.

*=The relationship between age and the change in perceptions of manufacturing careers is not due to chance and is statistically significant

Cross-tabs by gender

P27. Change in interest in STEM, by gender, pre-Tour

		Male (N=141)	Female (N=67)
A lot (N=115)	%	64%	37%
	N	90	25
Some (N=70)	%	31%	40%
	N	43	27
Very little (N=19)	%	5%	18%
	N	7	12
Not at all (N=4)	%	1%	5%
	N	1	3

P28. Change in interest in STEM, by gender, post-Tour

		Male (N=139)	Female (N=65)
A lot (N=131)	%	71%	51%
	N	98	33
Some (N=59)	%	25%	37%
	N	35	24
Very little (N=9)	%	4%	6%
	N	5	4
Not at all (N=5)	%	1%	6%
	N	1	4

P29. Change in interest in manufacturing careers, by gender, pre-Tour

		Male (N=133)	Female (N=67)
A lot (N=61)	%	40%	12%
	N	53	8
Some (N=75)	%	37%	39%
	N	49	26
Very little (N=43)	%	17%	31%
	N	22	21
Not at all (N=21)	%	7%	18%
	N	9	12

P30. Change in interest in manufacturing careers, by gender, post-Tour

		Male (N=136)	Female (N=63)
A lot (N=98)	%	56%	35%
	N	76	22
Some (N=67)	%	33%	35%
	N	45	22
Very little (N=14)	%	5%	11%
	N	7	7
Not at all (N=20)	%	6%	19%
	N	8	12

P31. Awareness of manufacturing careers, by gender, pre-Tour

		Male (N=136)	Female (N=68)
A lot (N=69)	%	37%	28%
	N	50	19
Some (N=91)	%	43%	47%
	N	59	32
Very little (N=31)	%	16%	13%
	N	22	9
Not at all (N=13)	%	4%	12%
	N	5	8

P32. Awareness of manufacturing careers, by gender, post-Tour

		Male (N=135)	Female (N=66)
A lot (N=121)	%	63%	55%
	N	85	36
Some (N=61)	%	29%	33%
	N	39	22
Very little (N=8)	%	4%	3%
	N	6	2
Not at all (N=11)	%	4%	9%
	N	5	6

P33. Perceptions of manufacturing careers, by gender, pre-Tour

		Male (N=146)	Female (N=72)
I thought they were good (N=109)	%	56%	38%
	N	82	27
I thought they were just ok (N=65)	%	26%	38%
	N	38	27
I didn't think they were good (N=15)	%	8%	4%
	N	12	3
I didn't think about them (N=19)	%	4%	18%
	N	6	13
I am not sure (N=10)	%	6%	3%
	N	8	2

P34. Perceptions of manufacturing careers, by gender, post-Tour

		Male (N=146)	Female (N=72)
I thought they were good (N=174)	%	82%	75%
	N	120	54
I thought they were just ok (N=31)	%	15%	13%
	N	22	9
I didn't think they were good (N=1)	%	1%	0%
	N	1	0
I didn't think about them (N=7)	%	0%	10%
	N	0	7
I am not sure (N=5)	%	2%	3%
	N	3	2

P35. Change in interest in STEM, by gender

		Male (N=139)	Female (N=65)
Increased (N=29)	%	11%	22%
	N	15	14
Maintained high interest (N=111)	%	62%	39%
	N	86	25
Maintained moderate or low interest (N=58)	%	25%	37%
	N	34	24
Decreased (N=6)	%	3%	3%
	N	4	2

Note: "Maintained high interest" means that the participant's interest level was "A lot" both before and after the Tour of Manufacturing. "Maintained moderate or low interest" means the participant's interest level was either "some", "very little" or "not at all" both before and after the Tour of Manufacturing.

P36. Change in interest in manufacturing careers, by gender*

		Male (N=133)	Female (N=63)
Increased (N=59)	%	27%	37%
	N	36	23
Maintained high interest (N=59)	%	39%	11%
	N	52	7
Maintained moderate or low interest (N=73)	%	32%	48%
	N	43	30
Decreased (N=5)	%	2%	5%
	N	2	3

Note: "Maintained high interest" means that the participant's interest level was "A lot" both before and after the Tour of Manufacturing. "Maintained moderate or low interest" means the participant's interest level was either "some", "very little" or "not at all" both before and after the Tour of Manufacturing.

*=The relationship between gender and the change in interest in manufacturing careers is not due to chance and is statistically significant.

P37. Change in awareness of careers in manufacturing, by gender

		Male (N=134)	Female (N=66)
Increased (N=70)	%	34%	38%
	N	45	25
Maintained high awareness (N=67)	%	37%	26%
	N	50	17
Maintained moderate or low awareness (N=58)	%	28%	30%
	N	38	20
Decreased (N=5)	%	1%	6%
	N	1	4

Note: "Maintained high awareness" means that the participant's awareness level was "A lot" both before and after the Tour of Manufacturing. "Maintained moderate or low interest" means the participant's awareness level was either "some", "very little" or "not at all" both before and after the Tour of Manufacturing.

P38. Change in perceptions of manufacturing careers, by gender

		Male (N=137)	Female (N=70)
Increased (N=71)	%	30%	43%
	N	41	30
Maintained high perception (N=109)	%	60%	39%
	N	82	27
Maintained moderate or low perception (N=26)	%	10%	17%
	N	14	12
Decreased (N=1)	%	0%	1%
	N	0	1

Note: "Maintained high perception" means that the participant's perception level was "good" both before and after the Tour of Manufacturing. "Maintained moderate or low perception" means the participant's perception level was either "okay", "not good" or "didn't think about it" both before and after the Tour of Manufacturing.

Host survey closed-ended question responses

H1. Days of Tour of Manufacturing participation (N=52)

	N	%
Thursday, October 1	5	10%
Friday, October 2	5	10%
Saturday, October 3	10	20%
Monday, October 5	3	6%
Tuesday, October 6	6	12%
Wednesday, October 7	1	2%
Thursday, October 8	14	27%
Friday, October 9	7	14%
Tuesday, October 13	2	4%
Wednesday, October 14	0	0%
Thursday, October 15	2	4%
Friday, October 16	1	2%
Saturday, October 17	1	2%
Monday, October 19	1	2%
Tuesday, October 20	2	4%
Wednesday, October 21	4	8%
Thursday, October 22	5	10%
Friday, October 23	0	0%
Monday, October 26	0	0%
Tuesday, October 27	2	4%
Wednesday, October 28	0	0%
Thursday, October 29	1	2%
Wednesday, November 4	1	2%

Note: Percentages may equal more than 100% as respondents were able to give multiple responses.

H2a. How hosts heard about the Tour of Manufacturing (N=52)

	N	%
Local chamber of commerce	14	27%
Received an email about the Tour	11	21%
Manufacturing association	5	10%
Tourofmanufacturingmn.com	3	6%
Dreamitdoitmn.com	2	4%
Other (please specify)	17	33%

H2b. Who did you get the email from? (N=10)

	N	%
Dream it. Do it. MN	4	40%
Tri-State Manufacturers'	3	30%
Other (please specify)	3	30%

H3. Primary audience for your tour (N=49)

	N	%
Schools	22	45%
Both schools and community	15	31%
Community	11	22%
Other	1	2%

H4. Was your tour open to the public or was it closed (N=49)

	N	%
Open to the public	34	69%
Closed tour for schools	15	31%

H5. Estimated number of visitors (N=50)

	N
Minimum	0
Maximum	347
Average (per respondent site)	84
Total (all respondent sites)	4055

Note: Three sites reported fewer than 10 visitors, including two that had no visitors.

H6. Value of the Tour of Manufacturing

		Very valuable	Somewhat valuable	A little valuable	Not at all valuable	N/A
Building awareness of or interest in manufacturing as a career option (N=48)	%	69%	19%	4%	2%	6%
	N	33	9	2	1	3
Marketing or building awareness of your business to the general public (N=48)	%	54%	27%	2%	4%	13%
	N	26	13	1	2	6
Identifying potential employees or workers (N=48)	%	29%	25%	23%	8%	15%
	N	14	12	11	4	7
Employees interacting with people outside the organization (N=48)	%	35%	25%	23%	4%	13%
	N	17	12	11	2	6
Identifying potential customers (N=48)	%	8%	8%	19%	35%	29%
	N	4	4	9	17	14

H7. Success of individual Tour of Manufacturing components

		Very successful	Somewhat successful	A little successful	Not at all successful
The engagement of the tour participants (N=48)	%	63%	27%	4%	6%
	N	30	13	2	3
The people who attended the tour were who you wanted (N=47)	%	30%	47%	15%	9%
	N	14	22	7	4
The number of tour participants (N=48)	%	44%	29%	15%	13%
	N	21	14	7	6

H8. Challenges of individual Tour of Manufacturing components

		Very challenging	Somewhat challenging	A little challenging	Not at all challenging	Not applicable
Providing staff time to lead the tours (N=47)	%	4%	19%	30%	36%	11%
	N	2	9	14	17	5
Interrupting manufacturing processes (e.g., line shut down) (N=47)	%	6%	2%	28%	47%	17%
	N	3	1	13	22	8
Working with the coordinating organizations (e.g., associations, chambers, 360º Center, etc.) (N=47)	%	2%	2%	17%	66%	13%
	N	1	1	8	31	6
Assuring participant safety (N=47)	%	2%	9%	34%	49%	6%
	N	1	4	16	23	3
Interrupting front or back office business functions (not related to manufacturing) (N=47)	%	2%	9%	26%	49%	15%
	N	1	4	12	23	7
Coordinating the tour participants (e.g., parking) (N=47)	%	0%	6%	26%	60%	9%
	N	0	3	12	28	4

H19. Tour of Manufacturing participation worthwhile (N=48)

	N	%
Yes, very	30	63%
Yes, somewhat	13	27%
No	4	8%
Not sure	1	2%

H10. Likelihood of participating in Tour of Manufacturing again (N=48)

	N	%
Yes, certainly	31	65%
Yes, maybe	13	27%
No	2	4%
Not sure	2	4%

H11. Participated in Tour of Manufacturing last year (N=48)

	N	%
No	28	58%
Yes	20	42%

H12. Materials used in preparation for your tour (N=27)

	N	%
Company listing on Tour of Manufacturing website	16	59%
Press release template	10	37%
Letter to schools	7	26%
Customizable flyers about your local event	4	15%
Customizable posts for social media	4	15%
Dream it. Do it. MN Giveaways	4	15%
Customizable radio ad	2	7%
Public service announcements	2	7%
Low-cost option to purchase signage	0	0%
Other	5	19%

Notes: Percentages may equal more than 100% as respondents were able to give multiple responses

H13. Most useful materials used in preparation for your tour (N=22)

	N	%
Company listing on Tour of Manufacturing website	6	27%
Letter to schools	5	23%
Press release template	5	23%
Customizable flyers about your local event	2	9%
Custom posts for social media	1	5%
Other	2	9%

H14. Region (N=47)

	N	%
Central	11	23%
South Central	11	23%
Metro area	9	19%
South East	7	15%
Northwest	4	9%
West Central	3	6%
Northeast	2	4%

Host survey open-ended question responses

H15. Method used to count the number of participants (N=48)

	N	%
Sign-in sheet at event	19	40%
Head-count	9	19%
None	7	15%
Tracking the amount of items handed out to participants	5	10%
Other	8	17%

Note: Five sites reported no method for counting participants

H16. Most valuable aspect of the Tour of Manufacturing (N=43)

	N	%
Public awareness for business	16	37%
Youth being able to experience the manufacturing field	13	30%
Recruitment of prospective employees	7	16%
Other	7	16%

H17. Most successful aspect of the Tour of Manufacturing (N=40)

	N	%
Raising awareness about manufacturer	11	28%
Student participation during tours	8	20%
Tour of business	6	15%
Head-count	6	15%
Other	9	23%

H18. Biggest challenge or barrier (N=38)

	N	%
Lack of participants	10	26%
Scheduling	7	18%
Too few tour guides	6	16%
Nothing/none	5	13%
Tour promotion	3	8%
Student tours of facility	1	3%
Loss of productivity	1	3%
Other	5	13%

H19. Why the Tour of Manufacturing was not worthwhile (N=5)

	N
Not enough participants	5

H20. Why host would not participate in the Tour of Manufacturing again (N=3)

	N
Not enough participants	3

H21. Promotional materials used in preparation for the Tour of Manufacturing (N=4)

	N
None	2
Marketing through the Chamber of Commerce	1
Sign-out sheet in front of building	1

H22. Most useful promotional materials in preparation for the Tour of Manufacturing (N=2)

None	**2**
None	1
Other	1

H23. Other types of support that would have been helpful (N=16)

	N	%
Marketing support from 360	5	31%
Support from schools	3	19%
Having more local businesses participate	2	13%
Other	5	38%

Note: "Other" included: Facts and figures on area jobs in manufacturing, receive information about the Tour from the Chamber of Commerce or some other source, shuttles in Mankato for participants from MSU.

H24. Additional comments (N=18)

	N	%
Positive comments	7	39%
Support from schools	7	39%
Other	5	22%