
RESEARCH STUDY ON
FLEXIBLE DECISION MAKING IN RESPONSE
TO DISRUPTIVE EVENTS ON
CONSTRUCTION SITES



Foreman Baseline Assessment

STUDY SPONSORED BY:

ILLINOIS INSTITUTE OF TECHNOLOGY &
NATIONAL SCIENCE FOUNDATION

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FOR OFFICIAL USE ONLY	
Participant Identification Number	

FOREMAN BASELINE QUESTIONNAIRE

This questionnaire will help us to establish a personal baseline for each participant.

1. Demographics

- 1.1. Your name: _____
- 1.2. Your company's name: _____
- 1.3. Your e-mail (ONLY if you would like a copy of the findings): _____
- 1.4. Age. What is your age? _____
- 1.5. Gender. What is your gender?
 Male Female
- 1.6. Race/ethnicity. How do you describe yourself?
 American Indian or Alaska Native
 Hawaiian or Other Pacific Islander
 Asian or Asian American
 Black or African American
 Hispanic or Latino
 Non-Hispanic White

2. Professional Background

- 2.1. Your current position is:
 Apprentice Journeyman Foreman
 General Foreman Superintendent Other
- 2.2. How many TOTAL years of experience in the construction industry do you have?
 0-12 months
 1 year – 4 years 11 months
 5 years – 9 years 11 months
 10 years – 14 years 11 months
 15 years – 19 years 11 months
 20 years – 24 years 11 months
 25 years – 29 years 11 months
 30 years or more
- 2.3. How many years of experience in THIS POSITION do you have?
 0-12 months
 1 year – 4 years 11 months
 5 years – 9 years 11 months
 10 years – 14 years 11 months
 15 years – 19 years 11 months
 20 years – 24 years 11 months
 25 years – 29 years 11 months
 30 years or more

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2.4. Education. What is the highest grade or year of school you completed?

- Never attended school or only attended kindergarten
- Grades 1 through 8 (Elementary)
- Grades 9 through 11 (Some high school)
- Grade 12 or GED (High school graduate)
- College: 1 year to 3 years (Some college or technical school)
- College: 4 years (College graduate)
- Graduate School (Advanced Degree)

3. Project Characteristics/Work Atmosphere

3.1. What is the stage of the project you are working on?

- Very beginning
- Early stage
- Middle stage
- Later stage
- Very end

3.2. What type of project are you working on?

- Commercial Industrial Institutional Other

3.3. Specifically what type of project are you working on (such as hospital, theater, warehouse, airport runway, school, etc.):

3.4. Are you working in an unoccupied space or an occupied space?

- Unoccupied space, Building is occupied, Work space is within Other
for example new but work space is not occupied area
construction occupied

3.5. Schedule. This project is:

- Ahead of schedule On schedule Behind schedule I don't know

3.6. Cost. The cost of this project is:

- Less than estimated About the same as estimated
 More than estimated I don't know

3.7. Rate the level of overall organization on the jobsite you are working on.

- Low Moderately low Medium Moderately high High

3.8. Rate the level of turbulence or chaos on the jobsite you are working on.

- Low Moderately low Medium Moderately high High

3.9. Rate the level of time pressure you feel to complete your tasks overall on this project.

- Low Moderately low Medium Moderately high High

3.10. Rate how stressful you find the work atmosphere to be overall on this project.

- Low Moderately low Medium Moderately high High

3.11. Rate how challenging you find the work to be on this project.

- Low Moderately low Medium Moderately high High

3.12. Rate the level of completeness of the design drawings / specs for this project.

- Low Moderately low Medium Moderately high High

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- 3.13. Rate the level of cooperation between the major parties on this project, including the owner, architect/designer, engineers, G/C, subcontractors, vendors, etc.
 Low Moderately low Medium Moderately high High
- 3.14. Rate the level of collaboration between the major parties on this project, including the owner, architect/designer, engineers, G/C, subcontractors, vendors, etc.
 Low Moderately low Medium Moderately high High
- 3.15. Rate the level of communication between the major parties on this project, including the owner, architect/designer, engineers, G/C, subcontractors, vendors, etc..
 Low Moderately low Medium Moderately high High

4. Describe Your Personal Characteristics

Please use this list of the following 50 items to describe yourself as accurately as possible. Describe yourself as you see yourself *at the present time*, not as you wish to be in the future. Describe yourself as you are, generally or typically, as compared with other persons you know of the same sex and of roughly your same age.

After reading each item, please check the number that best indicates how accurately that trait describes you, using the designated rating scale.

1. I often feel blue.

Inaccurate				Neither	Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. I tend to dislike myself.

Inaccurate				Neither	Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. I am often down in the dumps.

Inaccurate				Neither	Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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4. I have frequent mood swings.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. I panic easily.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. I rarely get irritated.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. I seldom feel blue.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. I feel comfortable with myself.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. I am not easily bothered by things.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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10. I am very pleased with myself.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. I feel comfortable around people.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. I make friends easily.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. I am skilled in handling social situations.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. I am the life of the party.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. I know how to captivate people.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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16. I have little to say.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. I prefer to keep in the background.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. I would describe my experiences as somewhat dull.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. I don't like to draw attention to myself.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

20. I don't talk a lot.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. I believe in the importance of art.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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22. I have a vivid imagination.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

23. I tend to vote for liberal political candidates.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24. I tend to carry the conversation to a higher level.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

25. I enjoy hearing new ideas.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

26. I am not interested in abstract ideas.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

27. I do not like art.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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28. I avoid philosophical discussions.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

29. I do not enjoy going to art museums.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

30. I tend to vote for conservative political candidates.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

31. I generally have a good word for everyone.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

32. I tend to believe that others have good intentions.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

33. I generally respect others.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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34. I accept people as they are.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

35. I make people feel at ease.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

36. I have a sharp tongue.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

37. I have a tendency to cut others to pieces.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

38. I tend to suspect hidden motives in others.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

39. I tend to get back at others.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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40. I have a tendency to insult people.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

41. I am always prepared.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

42. I really pay attention to details.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

43. I get tasks done right away.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

44. I tend to carry out my plans.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

45. I tend to make plans and stick to them.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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46. I often waste my time.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

47. I often find it difficult to get down to work.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

48. I do just enough work to get by.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

49. I often don't see things through.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

50. I tend to shirk my duties.

Inaccurate					Accurate			
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely
1	2	3	4	5	6	7	8	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

RESEARCH STUDY ON
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TO DISRUPTIVE EVENTS ON
CONSTRUCTION SITES



Foreman Survey

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ILLINOIS INSTITUTE
OF TECHNOLOGY
Transforming Lives. Inventing the Future.



1. What we are trying to learn

We believe that construction workers experience numerous disruptions each day that have the potential to slow down the progress of work. We also believe that foremen develop nearly instantaneous work-arounds (i.e., make fast decisions) that allow the work to continue, but little is known about these creative work-arounds and how they benefit job progress. As a result, this study aims to:

1. Better understand how decisions made by foremen in response to events that disrupt the installation can lead them to flexibly restructure tasks in order to adapt to a disruption as it unfolds.
2. Establish the conditions that facilitate or hinder the effectiveness of fast decisions and actions (i.e., work-arounds) on construction jobsites.

2. What to expect during the week

1. Each morning you should pick up the provided smart phone (i.e. the survey device) before you start work
2. The survey device will send you reminders up to five times per day for the week
3. A multiple-choice questionnaire will appear on the screen, and you will use your finger to respond to the questions
4. Each digital questionnaire can be answered in about 3 minutes
5. You will answer 21 questions and provide one brief voice recording each time the alarm beeps
6. After you answer the questions, the screen will go blank until the alarm beeps again
7. At the end of the day, you should plug your survey device into the charging station so that it can re-charge overnight.
8. In addition to using the survey device, you may also be asked to make written responses to questions that require a longer response.

3. The final product of the research

This research is theoretical, meaning that its main purpose is to help us better understand the phenomenon of how disruptions impact the foreman's ability to make good, fast decisions. When the study is completed, we expect to have a pretty good idea of the types of disruptions that generate the most substantial workarounds, as well as the factors that contribute to good, fast decision making, such as good planning or experience.

What we won't know is how the disruptions and decision-making influence productivity because we didn't specifically investigate that relationship in this study, but it will likely be the topic of the next study once we have the foundation laid for understanding how workers overcome disruptions through fast decision-making.

4. What are the ways that an improvised action can occur?

Typically, foremen are responsible for developing plans in order to establish tasks that must be completed by the crew members to meet a specified deadline. In order to “follow the standard procedure” for completing the task (i.e., follow the plan), a crew member typically will perform...

- ...a specific task
- ...in a specific location
- ...at a specific time
- ...using a specific method

If these conditions can't be met, then the foreman and crew member will need to improvise a decision and/or action in order to continue working. Improvising means you are thinking on your feet so that you can keep working productively. An improvised decision/action occurs when the activity changes, the location changes, the time changes, or the method changes.

5. Definitions

DISRUPTION: To interrupt or impede the progress of performing a task or an activity that involves installation of the work; in some cases, the disruption may cause a crew member to demobilize, remobilize, relocate, re-tool, lose focus, or lose concentration.

EXAMPLES OF DISRUPTIONS:

1. Someone gets in the way of the work, such as another trade worker, and the scheduled task cannot be completed.
2. There is a physical obstruction preventing completing of the task, such as materials or debris
3. The task requires two people but only one person is available to help complete the task
4. You must re-assign a crew member to a different task that is “hot” or must be done now
5. You have to change the sequence of the work, such as assign the crew member to a different room rather than work in the scheduled room
6. The drawings changed after the installation of the work had been completed, so you had to assign crew members to remove and re-install everything according to the new drawings (i.e., rework)
7. The crew members do not have the materials or tools needed to complete the scheduled task
8. A tool breaks preventing the crew member from working exactly as planned
9. You lack of information / directions / communication that would allow the work to proceed

6. The digital survey questions – Foreman

Identified below are all of the questions that appear on your Galaxy Player.

1. CREW QUESTIONS

1.1. How many crew members are working for you right now?

1. 1-2
2. 3-4
3. 5-6
4. 7-8
5. 9-10
6. More than 10

2. DISRUPTION QUESTIONS

2.1. What caused the most recent disruption to your crew member's work?

1. Another trade was in the way
2. Other non-trade people were in the way
3. Another crew member was in the way
4. Another trade interrupted the installation
5. Other non-trade people interrupted the installation
6. Another crew member interrupted the installation
7. Materials/tools/trash were in the way
8. Lack of help from another crew member
9. Someone requested a change of sequence
10. Rework was needed
11. Lack of materials / tools / equipment
12. Lack of information / directions / communication
13. Weather impacts
14. Other

2.2. How frequently have you encountered a similar type of disruption?

1. Never
2. A few times a year
3. A few times a month
4. A few times a week
5. Daily

2.3. To what extent did you anticipate this disruption?

1. Completed unexpected
2. Moderately unexpected
3. Moderately expected
4. Expected

2.4. What general type of task was the crew member scheduled to work on BEFORE the disruption?

1. Demo
2. Temp electric

3. Underground work
4. Setting hangers, brackets, or mounting hardware
5. Drilling holes or cutting
6. Setting boxes
7. Installing branch circuit conduits
8. Installing feeder conduits
9. Installing MC cable or whips
10. Installing electrical equipment
11. Commissioning electrical equipment
12. Non-electrical equipment hook-ups
13. Trouble-shooting equipment or circuits
14. Branch-line wire pull
15. Homerun wire pull
16. Feeder wire pull
17. Cable tray installation
18. Low-voltage wire pull / installation
19. Lighting trim-out
20. Furniture trim-out
21. Other trim-out
22. Coordination with others
23. Layout
24. Material delivery
25. Material distribution
26. Tool-up
27. Site protection, tarping, sheeting, etc.
28. Clean up / pick-up
29. Other

2.5. What general type of task did the crew member work on AFTER the disruption?

1. Demo
2. Temp electric
3. Underground work
4. Setting hangers, brackets, or mounting hardware
5. Drilling holes or cutting
6. Setting boxes
7. Installing branch circuit conduits
8. Installing feeder conduits
9. Installing MC cable or whips
10. Installing electrical equipment
11. Commissioning electrical equipment
12. Non-electrical equipment hook-ups
13. Trouble-shooting equipment or circuits
14. Branch-line wire pull
15. Homerun wire pull
16. Feeder wire pull
17. Cable tray installation
18. Low-voltage wire pull / installation
19. Lighting trim-out

20. Furniture trim-out
21. Other trim-out
22. Coordination with others
23. Layout
24. Material delivery
25. Material distribution
26. Tool-up
27. Site protection, tarping, sheeting, etc.
28. Clean up / pick-up
29. Other

3. DEGREE OF IMPROVISATION QUESTIONS

- 3.1. How extensively did you change the crew member's location?
 1. Not at all
 2. Sent to adjacent room
 3. Sent to non-adjacent room on same floor or area
 4. Sent to a different but adjacent floor or area
 5. Sent to a different, non-adjacent floor or area

- 3.2. How extensively did you change the crew member's task?
 1. None. I assigned exactly the same task with little explanation
 2. I assigned a similar type of task that required minor explanation
 3. I assigned a similar type of task that required major explanation
 4. I assigned a totally different but related task with new instructions
 5. I assigned a totally different unrelated task with new instructions

- 3.3. How extensively did the crew member's work method change?
 1. I don't know if the crew member changed the work method
 2. Not at all
 3. I made minor changes to the work method
 4. I made moderate changes to the work method
 5. I made substantial changes to the work method
 6. I totally changed the work method

- 3.4. How much time did it take you to think through a solution to the disruption?
 1. LESS than 1 minute
 2. Between 1-5 minutes
 3. Between 6-10 minutes
 4. Between 11- 20 minutes
 5. MORE than 20 minutes

- 3.5. How much time did it take the crew member to start fully executing your solution?
 1. LESS than 5 minutes
 2. Between 5-15 minutes
 3. Between 16-30 minutes
 4. Between 31-60 minutes

5. MORE than 60 minutes

4. SEVERITY OF IMPACT QUESTIONS

4.1. How extensively did the crew member have to retool as a result of the disruption?

1. Not at all
2. Minor re-tooling
3. Moderate re-tooling
4. Major re-tooling
5. Total re-tooling

4.2. How extensively did the disruption impact crew member morale?

1. Not at all
2. Minor
3. Moderate
4. Major
5. Total deflation

4.3. Overall, how severely did the disruption impact the completion of today's planned tasks?

1. Negligible disruption
2. Minor disruption
3. Moderate disruption
4. Major disruption
5. Total disruption

4.4. How extensively did the disruption reduce the productivity of your crew member?

1. No loss in productivity
2. Minor loss in productivity
3. Moderate loss in productivity
4. Major loss in productivity
5. Complete loss in productivity

5. EFFECTIVENESS OF DECISION QUESTIONS

5.1. How effective was your decision at allowing the crew member to work productively?

1. Very ineffective
2. Moderately ineffective
3. Neutral
4. Moderately effective
5. Very effective

5.2. How confident are you that your decision will NOT result in RE-WORK later?

1. Not at all confident
2. Moderately unconfident
3. Neither confident or unconfident
4. Moderately confident

5. Completely confident

5.3. How confident are you that your decision will NOT result in any NEW PROBLEMS?

1. Not at all confident
2. Moderately unconfident
3. Neither confident or unconfident
4. Moderately confident
5. Completely confident

5.4. How effective was your decision at allowing you to complete other tasks on your backlog?

1. Very ineffective
2. Moderately ineffective
3. Neutral
4. Moderately effective
5. Very effective
6. N.A.

5.5. How effective was your decision at minimizing the time spent on re-tooling and relocating?

1. Very ineffective
2. Moderately ineffective
3. Neutral
4. Moderately effective
5. Very effective

5.6. How effective was your decision at minimizing the impact on crew member morale?

1. Very ineffective
2. Moderately ineffective
3. Neutral
4. Moderately effective
5. Very effective

6. DECISION-MAKING QUESTIONS

6.1. Which three factors were the most important in thinking through a solution to the disruption?

1. Time required to relocate
2. Time required to re-tool
3. Selected a similar task from my backlog
4. Selected a total different task from my backlog
5. Skill level of the worker
6. Work quality of the crew member
7. How independently crew member can work
8. Confidence of the crew member
9. Impact on crew member motivation
10. What materials were available

6.2. Voice record a brief description of the crew member's disruption and also elaborate on the factors used for a solution.

7. EXIT INTERVIEW QUESTION

7.1. About how much of the planned tasks were actually completed by the crew members last week?

1. 0 – 24%
2. 25% – 49%
3. 50%-74%
4. 75%-99%
5. 100%

7. How to Get Help During the Study.

During the data collection period, if you encounter a problem with the PDA (such as a dead battery or a broken device), or if you do not understand a question, please contact one of the researchers right away to get assistance.

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Participant Identification Number	

EXIT INTERVIEW QUESTIONNAIRE – PART 1

The purpose of the exit interview is to learn more about the previous week during which the study took place.

1. Retrospective questions

Think back to last week and the types of disruptions and work-arounds you experienced.

1.1. Was this past week (of the study) a typical week for you? Please explain.

1.2. Was there anything different (personal or professional) that happened during the week of the study?

1.3. [Researchers will review the participant’s responses prior to the exit interview. At least one event will be selected for further discussion]. Can you describe what happened during this event? Describe the disruption, your reaction, how you developed a work-around, what your next action was, and how this impacted your work that morning/afternoon/day.

2. About how much of the planned tasks were actually completed by the crew members last week?
 1. 0 – 24%
 2. 25% – 49%
 3. 50%-74%
 4. 75%-99%
 5. 100%