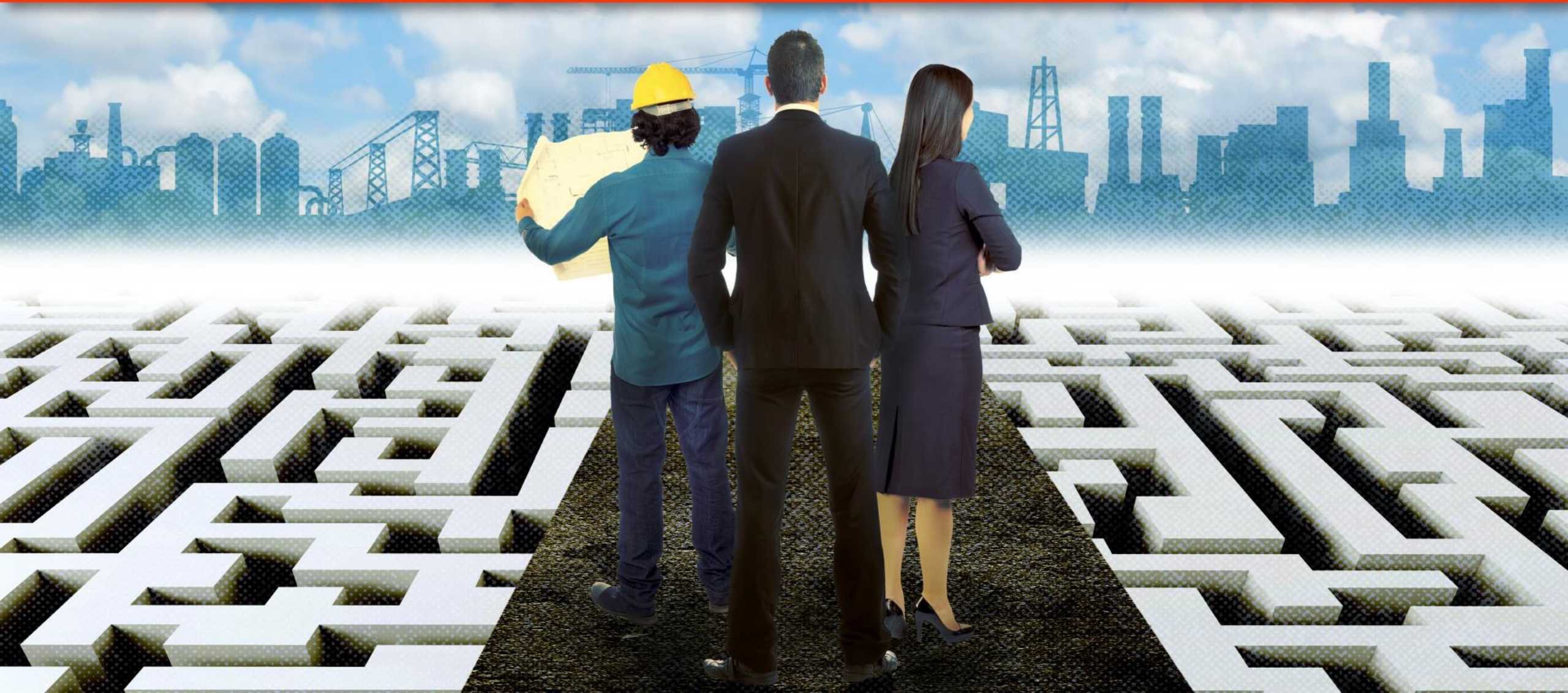


# COMPLEXITY, AMBIGUITY AND VOLATILITY

LEADING IN THE NEW NORMAL







**47TH ANNUAL  
ECC CONFERENCE**

**COMPLEXITY, AMBIGUITY | AND | VOLATILITY | LEADING IN THE  
NEW NORMAL**

# Plenary Session 1



**Nelson Repenning**  
**MIT Sloan School of Management**



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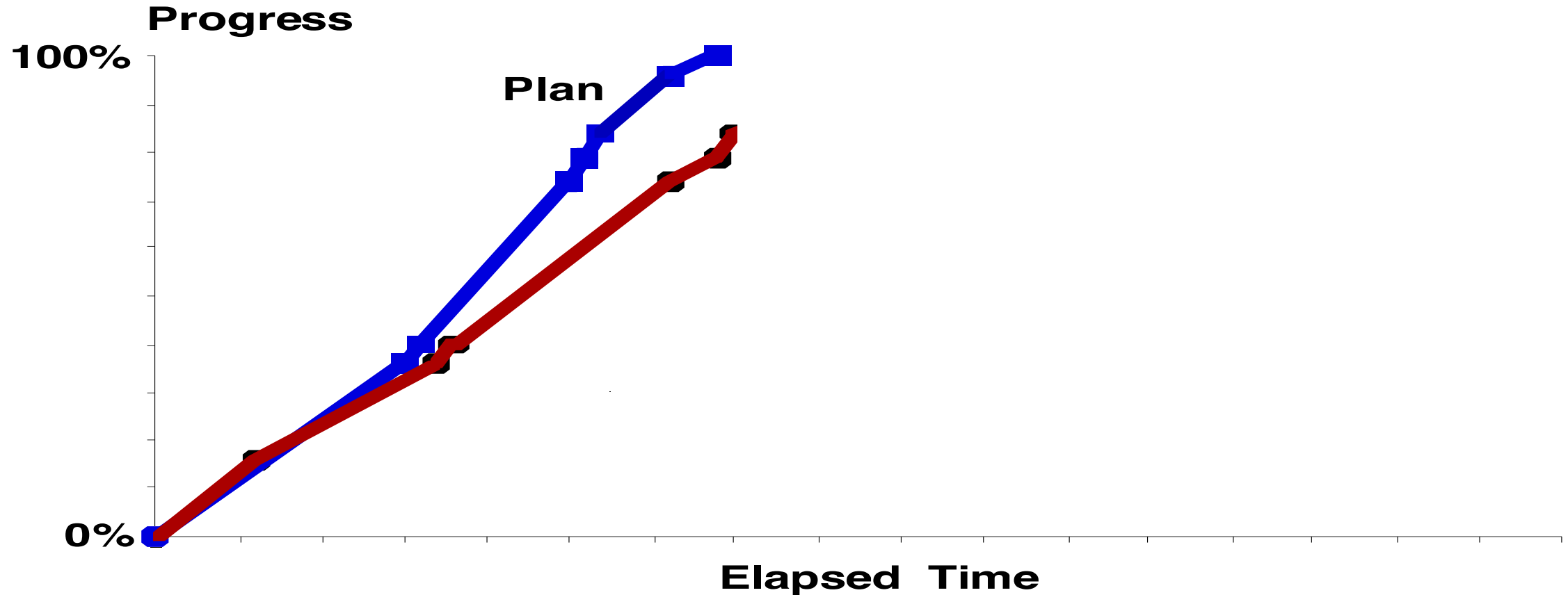
# **Why Good People Make Big Mistakes: Understanding the Psychology of Rigor**



**Nelson P. Repenning**

**School of Management Distinguished Professor  
MIT Sloan School of Management**

# Does this look familiar?



- 79% *apparently* complete by original deadline
- 2 major unplanned iterations requiring redesign
- Actual duration: 208% of schedule

# What kind of tree produces acorns?



**Oak**



# What's Nelson's favorite beverage?



Coke

**What do you call a funny story?**



**A Joke**

**What's another word for a cape?**



**A Cloak**



# What does a fire produce?



**Smoke**

**What do you call the white part of an egg?**



# Understanding Errors: A Model of How Our Brains Work

## Conscious Processing

- We have direct access
- selective and resource limited
- intermittently analytical
- computational powerful

Requests

“Chunks”

## Automatic Processing

- unconscious
- fast, effortless and parallel
- works based on “**pattern matching**” and “**frequency gambling**”



**LEFT**

**left**

**right**

**RIGHT**

**RIGHT**

**left**

**left**

**right**

**upper**  
**lower**

**lower**

**upper**  
**UPPER**

**lower**

**LOWER**  
**right**

# The cost of experience

- Attentional Checks
  - We stay in automatic mode and miss small anomalies or simply skip steps
  - “absent-mindedness is the penalty for skill”
- Selective Perception
  - We see what we believe (instead of the other way around)
- Incorrect Retrieval
  - We grab the wrong information from the red box

# Attentional Checks

- Count the number of times the letter 'f' appears in the following sentence?
  - These functional fuses have been developed after years of scientific investigation of electric phenomena, combined with the fruits of long experience on the part of the two investigators that have come forward with them for our meeting today.

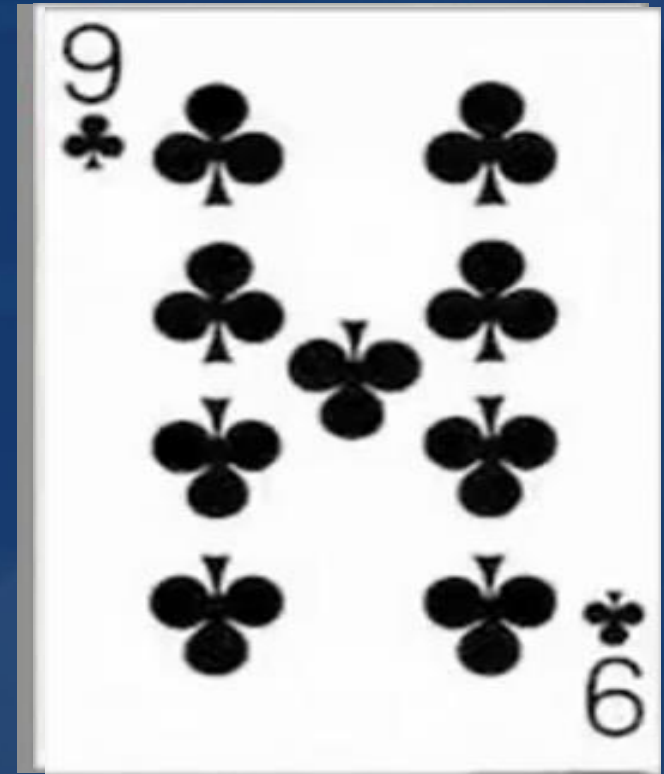
▪ Past experience lowers performance!



# Selective Perception

- Past experience strongly conditions what we see
- Images that don't match that experience slow processing dramatically

Identify the following playing cards



96% failed to correctly identify card

## Incorrect Retrieval

- Answer the following question:

**How many of each animal did Moses bring on the Ark?**

# The plot so far...

- Experience is a double-edged sword
- Experienced people are:
  - More efficient
  - Better at complex, novel tasks
- But, they also are more prone to:
  - Failing to make attentional checks
  - Selective perception
  - Incorrect retrieval
- **Your best people make the “dumbest” mistakes!**



# An Example of Improved Work Design

- Central Line Infections
  - ICU doctors put in about 4 million lines a year
  - About .5% of those become infected, 5% to 25% of those patients will die
  - Those who survive will spend an average of 10 extra days in the hospital
- Dr. Peter Pronovost works with team to redesign the work
  - Necessary supplies are put in a single cart (no searching)
  - Checklist of best practice is developed: 1) wash hands; 2) clean patient's skin; 3) sterile drape over patient; 4) wear appropriate PPE; and 5) sterile dressing over insertion site after insertion
  - Nurses instructed to voice when steps were skipped
  - Administrators to respond when system does not support checklist (e.g., no soap)
- In Michigan hospitals that used the technique:
  - Line infections fell by 66% in 3 months
  - Saved an estimated 1,500 lives and 175 million dollars

# Successful Process Improvement: Central Line Infection Reduction via Checklists



## Central Line Procedural Checklist

**Indication:** To document procedural practices in the CCU related to insertion technique for: CVP lines, dialysis access ports, and central lines (including PICC).

<b>Type of catheter:</b>	<input type="checkbox"/> Central Line	Location: _____
	<input type="checkbox"/> CVP	Location: _____
	<input type="checkbox"/> Dialysis Catheter	Location: _____
	<input type="checkbox"/> PICC Line	Location: _____
<b>Is this a NEW line:</b>	<input type="checkbox"/> YES	<input type="checkbox"/> NO
<b>Is the procedure:</b>	<input type="checkbox"/> Elective	<input type="checkbox"/> Emergent
	<input type="checkbox"/> Re-wire	<input type="checkbox"/> Re-position

Procedural Checklist		YES	YES (After Reminder)
<b>Safety Practice</b>			
<b>Before procedure, did the provider:</b>			
➤ <b>PERFORM PROCEDURAL PAUSE</b>			
	Perform patient ID X 2	<input type="checkbox"/>	<input type="checkbox"/>
	Announce the procedure to be performed	<input type="checkbox"/>	<input type="checkbox"/>
	Mark / assess site	<input type="checkbox"/>	<input type="checkbox"/>
	Position patient correctly for procedure	<input type="checkbox"/>	<input type="checkbox"/>
	Assemble equipment / verify supplies	<input type="checkbox"/>	<input type="checkbox"/>
	Utilize relevant documents (chart / forms)	<input type="checkbox"/>	<input type="checkbox"/>
	Order follow-up Radiology images (PRN)	<input type="checkbox"/>	<input type="checkbox"/>
➤ <b>Cleanse hands? (ASK, if unsure)</b>			
		<input type="checkbox"/>	<input type="checkbox"/>
➤ <b>Prep procedure site with ChloraPrep?</b>			
	<i>*30 seconds for dry site</i>	<input type="checkbox"/>	<input type="checkbox"/>
	<i>**2 minutes for moist site (esp. femoral)</i>		
➤ <b>Use large drape to cover patient in sterile fashion?</b>			
		<input type="checkbox"/>	<input type="checkbox"/>
<b>During procedure, did the provider:</b>			
➤ <b>Wear sterile gloves during catheter insertion?</b>			
		<input type="checkbox"/>	<input type="checkbox"/>
➤ <b>Wear hat, mask, and sterile gown?</b>			
		<input type="checkbox"/>	<input type="checkbox"/>
➤ <b>Maintain sterile field?</b>			
		<input type="checkbox"/>	<input type="checkbox"/>
➤ <b>Use ultrasound/Sonosite if appropriate?</b>			
		<input type="checkbox"/>	<input type="checkbox"/>
➤ <b>Did assisting physician follow the same precautions?</b> (hand washing, mask, gloves, gown)			
		<input type="checkbox"/>	<input type="checkbox"/>
➤ <b>Did all staff and patient in the room wear a mask?</b>			
		<input type="checkbox"/>	<input type="checkbox"/>
<b>After the procedure:</b>			
➤ <b>Was sterile technique maintained when applying dressing?</b>			
➤ <b>Was dressing dated?</b>			

Name of Intensivist: \_\_\_\_\_

Name of Procedure MD: \_\_\_\_\_

Name of Assisting MD: \_\_\_\_\_

Name of RN (auditor): \_\_\_\_\_ Today's Date: \_\_\_\_-\_\_\_\_-\_\_\_\_

Room: CCU Bed # \_\_\_\_\_

**PLEASE RETURN COMPLETED FORM TO:  
"BSI FORMS" LABELED ENVELOPE IN CCU-7 CONFERENCE ROOM**

PATIENT Label

**VIRGINIA MASON MEDICAL CENTER  
Central Line Procedural Checklist**

MRD: HOSP7

VMC FORM # XXXXXX (12-21-04)  
FTF (pending)



**J Street** ↗

**J Street PAC**



**CREATE POLITICAL SPACE  
FOR US LEADERSHIP  
ON A TWO-STATE SOLUTION**



# PROBLEM STATEMENT

Demotivating  
Culture of Fear  
Staff Berated  
Inhibits Participation & Innovation  
Feeds into Bad Meeting Culture  
\$110,000/year



# Identify the Root Causes

1. ME! I did minimal prep work. Inputs weak: mtgs unplanned, unintentional and haphazard; nothing sent out in advance...
2. I enabled others to shut down conversation / participation



3. Staff are spread across 11+ locations; insufficient A/V technology to close gap
4. 60-person meetings are tough to make participatory

# Awesome New Agendas!!!

## AGENDA September 9, 2014

...video hangout  
 ...maestro numbers  
 ...this week's survey

	Item	Purpose	Outcome	Process	Owner	Min
1	Meeting Feedback	Continuous Improvement	Common understanding of how feedback is being incorporated	Review survey #s & key takeaways from comments	Steve	2
2	This Week in the Bigger Picture	Update, Input & Align	a) Familiarity with top line senior staff discussions & decisions b) Understanding of how current events interplay with J Street strategy c) Qs addressed; wider insights inform tactical decisions	a) Senior staff mtg notes on p2 b) JBA offers 5 min analysis c) Steve facilitates; Qs can be asked of anyone in mtg	Steve	25
3	Clear Choices Update	Update	Staff know where we stand on respective Clear Choice campaign action items	See p2 checklist; Steve fields Q's; remaining Q's can be emailed	Steve	5
4	Event Spotlight: DC "What's Next"	Lessons Learned & Alignment	Staff have sense of various events around the organization by highlighting 1/week; focus on context, lessons learned & highlights	Kirzner shares context of "What's Next" programs, objectives, and highlights from DC	Kirzner	5
5	Leadership Training Summit	Alignment	Staff have a good understanding of the top line objectives and talking points re: LTS	Shaina reviews objs, top line numbers & reminders; fields Q&A	Shaina	4
6	This Week's Team Update: Political	Update	Staff have overview re: upcoming election; numbers overview: dollars, endorsees, win/loss projections, types of races; Shaheen as case study for response to attacks; mailer	Shared list of priority races; use Shaheen as case study; 5 min for Q&A	Kalik & Ben Shnider	10
10	Mazel Tovs	Celebrate Success	Staff know about the good events happening in each others' lives	Steve runs through list	Emily	2
11	3pm Survey	Feedback	100% participation, inform future meetings, to be shared, anonymous	Reminder: fill in <a href="#">survey</a> by 3:00pm debrief	Steve	2
Total:						55

### Mazel Tovs

1. Jodie's 1<sup>st</sup> JStreetiversary (9/9/14)
2. Logan's 1<sup>st</sup> JStreetiversary (9/9/14)

3. Dylan's 5<sup>th</sup> JStreetiversary - 9/14/14
4. Sarah B's 5<sup>th</sup> JStreetiversary - 9/14/14



# J Street **STAFF MEETING**

Survey Feedback: (from 9/2/14)

1. 4.04
2. 3.89
3. 4.11
4. 4.20

Total Responses: 45 ppl  
 Avg Response Time: 1m37s  
**AVG RESPONSE: 4.06**

## AGENDA

September 9, 2014

[...video hangout](#)  
[...maestro numbers](#)  
[...this week's survey](#)

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					Total:	55



Survey sent out  
after every meeting

Please respond to the following four statements:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. The goals of the meeting were clear AND were achieved	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. It was useful for me to be at this meeting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I had the materials I needed to make this meeting useful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Everyone respected the community agreements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other comments or Suggestions:

# Validate & Sustain

Target was to receive  
4.00 / 5.00 or higher at  
every meeting.

We averaged 4.21!



<u>Date</u>	<u>Target</u>	<u>Actual</u>
09/02	4.00	4.06
09/09	4.00	4.06
09/16	4.00	4.00
09/23	4.00	4.17
09/30	4.00	4.26
10/07	4.00	3.92
10/21	4.00	4.35
10/28	4.00	4.23
11/04	4.00	4.32
11/18	4.00	4.26
11/24	4.00	4.30
12/02	4.00	4.34
	Avg: 4.00	Avg: 4.21

# Guidelines for Meetings

- Meetings have three basic purposes
  - Make decisions
  - Solve problems
  - Creating meaning
- If you are not doing one of these things, then why are you having the meeting?

**Thank You!**

**nelson@mit.edu**