

Improving the Fire Department through lean, not "firefighting"

Brad BrownAssistant Fire Chief **Grand Rapids Fire Department**





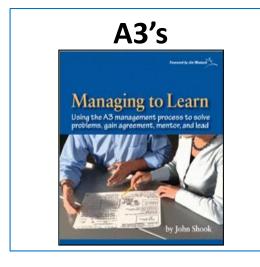


Main Topics

















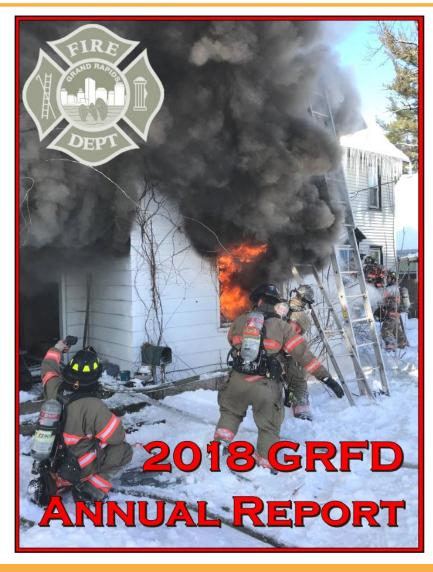




GRFD Overview







- 200,217 population
- 45.3 square miles
- \$31,482,122 budget
- 201 Personnel
- 11 Stations
- 74 Vehicles
- 22,395 incidents
- 30,697 responses



Why Lean?







Outcomes



Inputs

Resistance to Change







Psychologist William McDougall (1908)

"People are prepared to maintain a custom often at great cost of effort or discomfort, long after it serves any useful end"



American Social Psychologist Kurt Lewin (1947)
Argued that social norms become "vested interests" that we become highly protective of.

How's it Going?





Lean as a potential change to the system

Our Tools





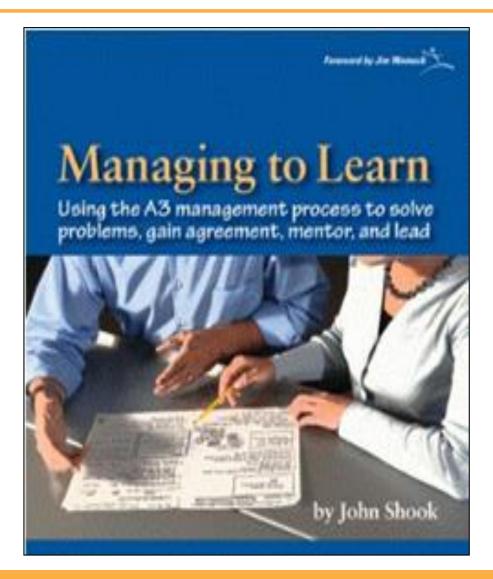


- A3 Problem Solving
- 5S-Sort, Straighten, Shine,
 Standardize, Sustain
- Process Mapping
- Standard Work
- Rapid Improvement Events

A3 Problem Solving Tool





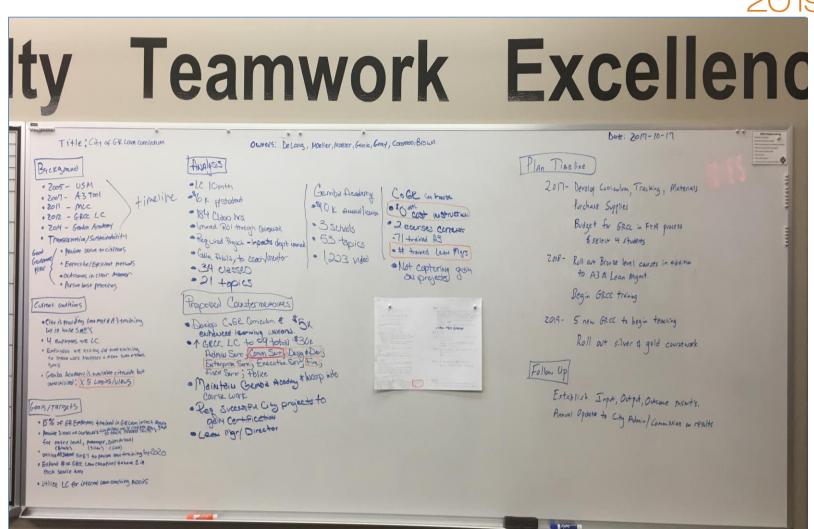


- A3 refers to a paper size that is roughly equivalent to an 11 x 17 sheet of paper
- The template involves several well defined steps
- The power is not in the paper, but the thought process

Asset Management A3





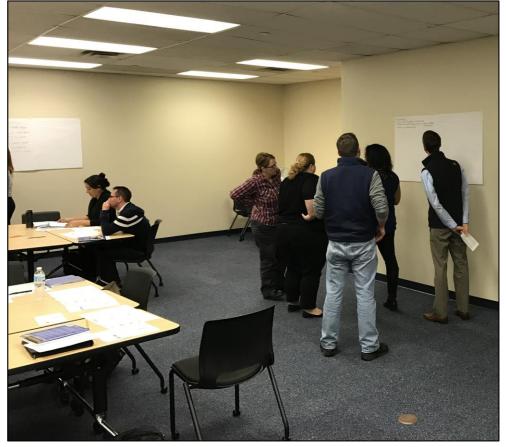


Teaching A3's for the City







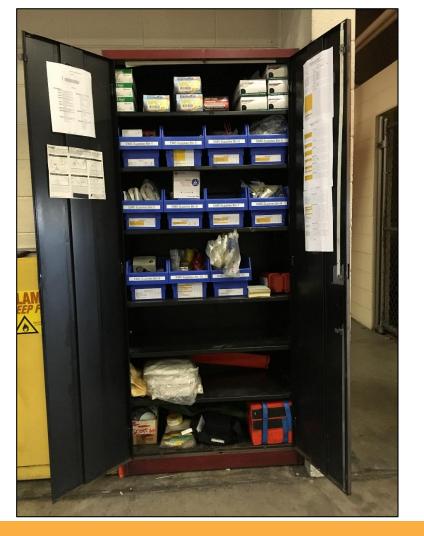


EMS 5S





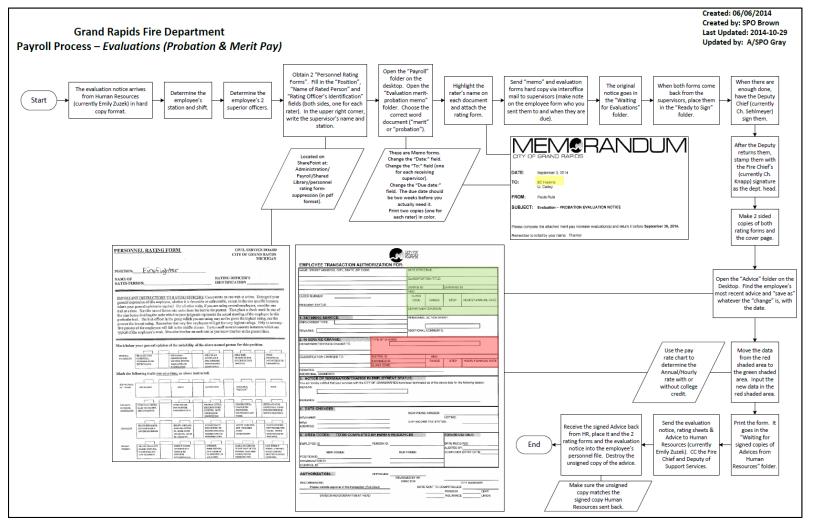




Process Mapping



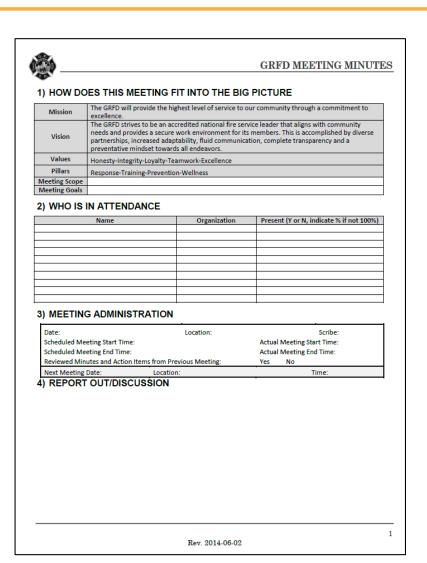




Standard Work – Meetings





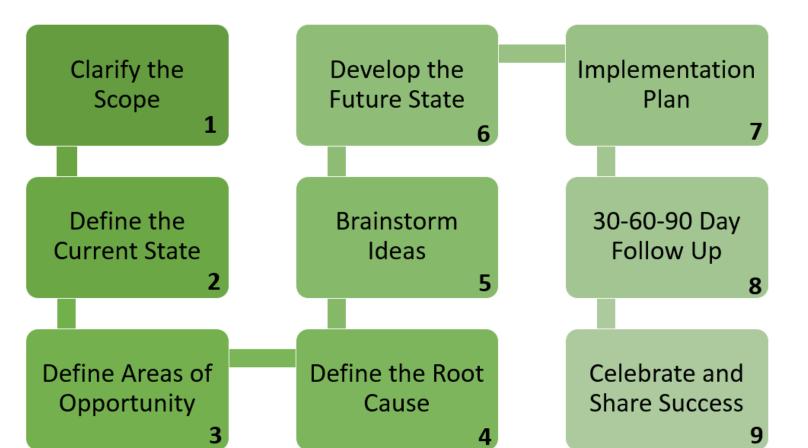


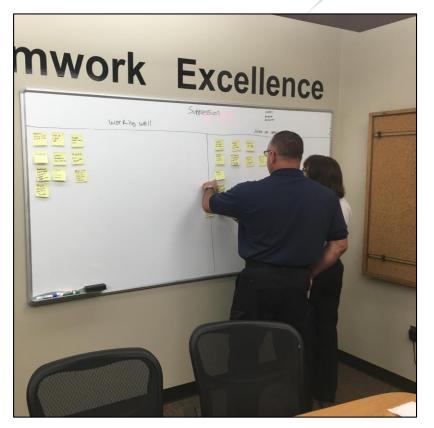
	IG ACTION ITEMS Action	Assigned To	Deadline	Complete
7) ADD	ITIONAL INFORMATION	ON	1	I

Rapid Improvement Events









How's it Going?





- Push systém
- ShotgunApproach
- Doing leanto people

Traditional Mutual Aid





METRO AREA FIRE SERVICE INITIAL EMERGENCY AUTOMATIC AID AGREEMENT Updated July 2011

THIS AGREEMENT made and entered into by the metropolitan communities of Kent County identified below on or after August 1, 2011.

WHEREAS, the parties are located in geographic proximity to each other; and

WHEREAS, it is to their mutual advantage and benefit that each of the parties agree to provide supplemental fire protection for **structural fires**, **vehicle fires**, **and medical 1 emergencies** through Initial Emergency Automatic Aid response; and

WHEREAS, the parties are authorized to enter into this Agreement by virtue of the provisions of Act 35 of Michigan Public Acts of 1951, as amended, being MSA 5.4081 et seq., MCLA 124.1 et seq.; and Act 7 of Michigan Public Acts of 1967, Extra Session, as amended, being MSA 5.4088(1) et seq., MCLA 124.501 et seq.

NOW, THEREFORE, the parties agree:

- 1. To provide Initial Emergency Automatic Aid Response to and for structural fires, vehicle fires, and medical 1 emergencies in designated areas, in accordance with this Agreement and adopted protocols as provided for herein.
- 2. With the approval of this Agreement by the governing body of a participating jurisdiction, the Chief Administrative Officer and the fire chief are authorized to enter into individual response agreement(s) by signing the "Initial Emergency Automatic Aid Response Protocol Form" ("Protocol Form"). A copy of the approved Protocol Form to be used by the parties is attached as Exhibit A and incorporated by reference.





Lean Mutual Aid



LEAN CHAMPION CERTIFICATION

Impacts and outcomes from past participants:

Line losing money:

- Cost savings per year \$300,000
- Profitable
- 85% reduction in time to get a part out

Production cell:

 50% reduction in time to get a part out

Product development:

 100% of Project Information forms completed properly

Small company implementation:

- Cost savings per year \$100,000
- 61% reduction in time to get a part out
- 62% reduction in machine set-up time

Medical Device

- 33% reduction in time to get a part out
- 46% reduction in machine set-up time
- Rework hours reduced to zero

Most companies today would say they are Lean; however, being a lean business is not a destination, it's an ever-changing road trip.

Whether you currently consider your workplace Lean, or need help just getting on the road toward being Lean, GRCC's Lean Champion Certification program can help.

Our comprehensive, learning system helps manage, not only the process changes, but also the magnitude of cultural changes that accompany the Lean conversion process.









In the competitive and economically challenging environment that many companies now face, staying ahead of competitors is a must. This is accomplished by meaningful change, aligned visions and the skillset to make those happen; the Lean Champion Certification achieves that."

Brad Brown, Strategic Planning Officer
 Grand Rapids Fire Department



Lean Mutual Aid











Mindset Change...





If we do not choose to plan, then we choose to have others plan for us."
Richard I. Winwood

Planning







Legend **Master Planning** Strategic Planning Operational Planning Budgetary Planning **Accreditation Planning**

= Annual 4 Hour Meeting (All Command Staff Meetings are 4 Hours) = Quarterly 2 Hour Meeting

= Monthly 1 Hour Meeting

= Bi-Weekly 1/2 Hour Meeting

Created by: GRFD Planning Division Last Updated: 2019-03-11

GRFD Integrated Planning Calendar

This calendar is dynamic in nature and subject to change! Meetings will: Occur if three or more are present, start on time, end on time, and utilize the standard templates. Scheduling goals: No Mondays or Fridays, No Tuesday mornings (payroll processing takes precedence).

Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 8 19 20 21 22 23 24 25 25 27 28

21 22 23 24 25 26 27

50 Mo Tu we 2 3 4 5 6 8 9 10 11 12 13 14 15 16 17 18 19

20 21 22 23 24 25 26

2018



8 9 4 11 (12) 13 15 16 17 87 19 20 22 23 24 25 26 27

Su Mo Tu We Th Fr Sa 1 2 3 15 6 7 8 9 00 11 12 13 14 15 16 17 (8) 19 20 21 22 23 24 25 26 27 28

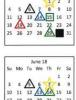
Mo Tu We Th

21 22 23 24 25 26

5 6 7 8 9 10 1 12 13 15 16 17 8 20 21 22 23 24

7 8 9 4 11 12 8 14 15 6 17 18 19 22 23 24 25 26 29 30 31

5 6 7 8 9 10 11 12 13 14 5 16 17 18 19 20 21 22 3 24 25









2 3 4 5 6 7 8 9 (10 11 12 13 14 15 16 17 18 19 20 22 23 24 25 26

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 2 2

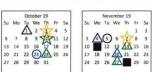
21 22 23 28 29 30



2019





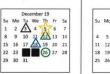




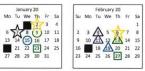








2020













Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 26

Holidays = Weekend holidays are observed on the adjacent weekday.

January 1, July 4, December 24 & 25 MLK - 2018-01-15/2019-01-21/2020-01-20 President's Day - 2018-02-19/2019-02-18/2020-02-17 Good Friday - 2018-03-30/2019-04-19/2020-04-10

Memorial Day - 2018-05-28/2019-05-27/2020-05-25 Labor Day - 2018-09-03/2019-09-02/2020-09-07 Veteran's Day - 2018-11-12/2019-11-11/2020-11-11 Thanksgiving Day - 2018-11-22/2019-11-28/2020-11-26

Master Planning = Ties together all GRFD plans and measure their progress at the macro level. Resource alignment will be key. Strategic Planning = Will be to assess the adopted plan, track its performance, and to create a new strategic plan. Operational Planning = To evaluate and measure the 4-Pillars. Focus on each pillar's strategy, objectives, initiatives, and targets. Budgetary Planning = Will evaluate the progress of each of the areas and programs. Forecasting and planning will also be involved. Accreditation Planning = Progress on Strategic and Specific Recommendations will be discussed and reviewed

Tu We Th

6 Month Alignment Sessions







Response **Strategic and Operational**

Planning Review Team 6 Month (July—December 2017) **Priorities/Opportunities**

- 1. Replacement apparatus E3 and E4 order has been placed with Rosenbauer
- 2. Support Vehicles Conceptual discussions taking place

Training

- 1. Host 1-3 NFA Classes
- 2. Strengthen the Recruit Mentoring Program
- 3. Update the Training Center replacement plan
- 4. Attend a Station Design Conference Use Monroe and Division as satellite **Training Centers**

Prevention

- 1. Commercial Occupancy Public **Education handouts**
- 2. Update Fire Life Safety contractor information
- 3. Contribute to the State of Michigan Community Risk Reduction task force

Wellness

- 2. Long term plan for marketing and managing interns
- 3. Include an Employee Satisfaction Section in the next Internal Survey

Support Services

- 1. Designate a 40 Hour point of contact | 1. Public Information Officer Identify personnel and schedule training
 - 2. Succession Training Identify personnel and training courses for development

Employee Participation







FY19-FY21 STRATEGIC PLAN MISSION

The Grand Rapids Fire Department values people by saving lives, protecting property, and responding to the needs of our community.

Providing world class fire services for our community by employing a diverse workforce which respects, values, and develops our members

VALUES Honesty • Integrity • Loyalty • Teamwork • Excellence



Margaret Felix Wes Kelly Eric Dokter Ron Tennant Backup Backup Backup Steve Lohman Don Gerkey Todd VanderWall Brad Brown RESPONSE WELLNESS SUPPORT SERVICES TRAINING PREVENTION Effective all hazards Provide the appropriate Create a safer community A healthier workforce Provide continuous deployment model with by implementing an through researching. skills and education to improvement of resources **DESIRED** effective community risk in a deliberate and planned appropriate staff and ensure sustainability and designing, and OUTCOME apparatus growth at all ranks reduction program implementing a structured manner wellness program Increase community Comprehensive training Perform a community risk Research baseline Ensure continuity of awareness of firefighting, assessment to identify operations through curriculum developlment insurance costs to ensure FY19 EMS, and Special areas of concern development of a best value **STRATEGIES** Operations promotion pathway and succession plan Ensure appropriate Implementation of training Develop formal community Design and develop a Development of a diverse response to high-risk risk reduction modules structured wellness hiring plan to ensure our curriculum FY20 building and events workforce represents the program **STRATEGIES** community we serve Increase staffing levels to Evaluate training Implementation of the Implement and evaluate Provide comprehensive meet community risks FY21 curriculum and make community risk reduction programmatic changes to asset management in a adjustments the wellness plan fiscally responsible manner **STRATEGIES**

Managing for Daily Improvement





Performance Indicator 3C.1 Some form of organizational management process is identified and used to track progress and results of agency goals and objectives relating to general organizational and operational programs

MDI Core Tenets





- Simple and Visual
- Clearly Defined Goals
- Data Driven
- Frequent Face to Face Communication!



GRFD MDI Cascade of Events



5 Year City Sustainability Plan

3 Year GRFD Strategic Plan

1 Year GRFD Operational Plan

6 Month SP/OP Report

Quarterly Metrics

Monthly Goals

Weekly MDI Walk

Daily Huddles

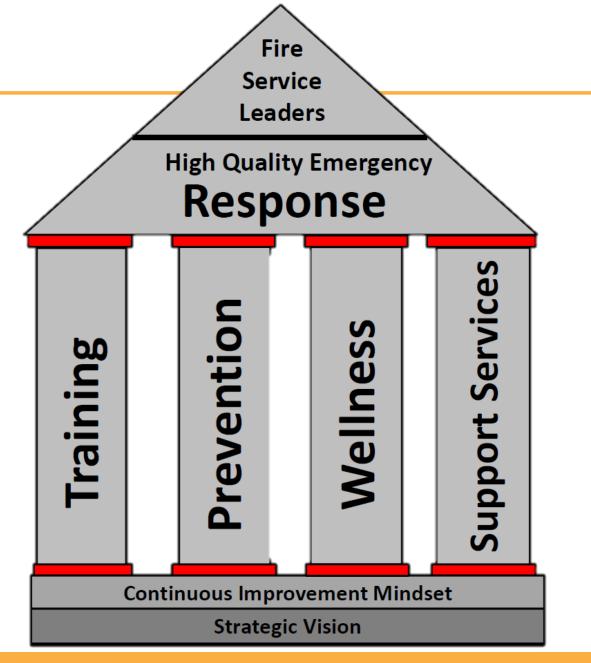
Personal Kanban





MDI Timing







MDI Alignment







MDI Initial Try

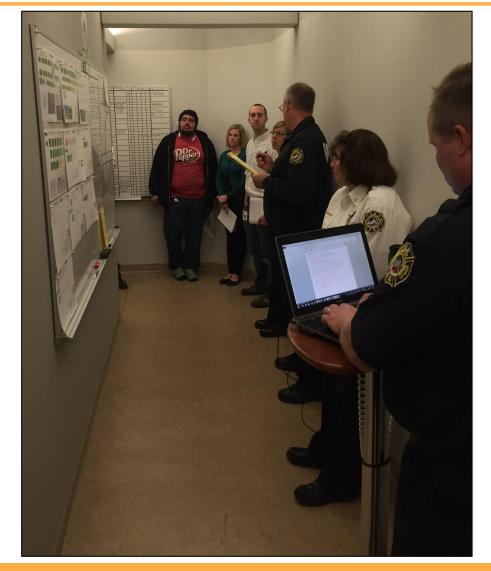


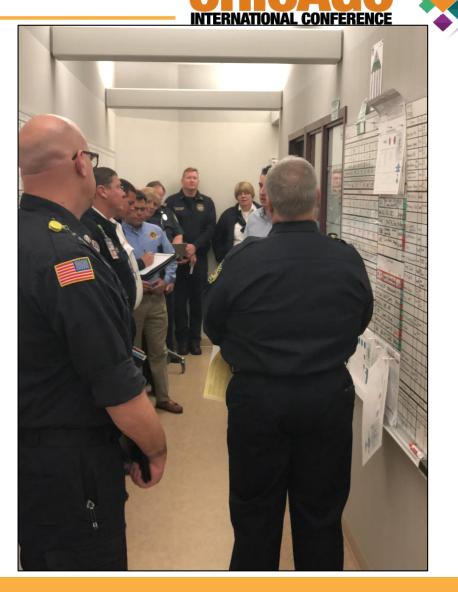


MDI 2.0



Continuous Improvement

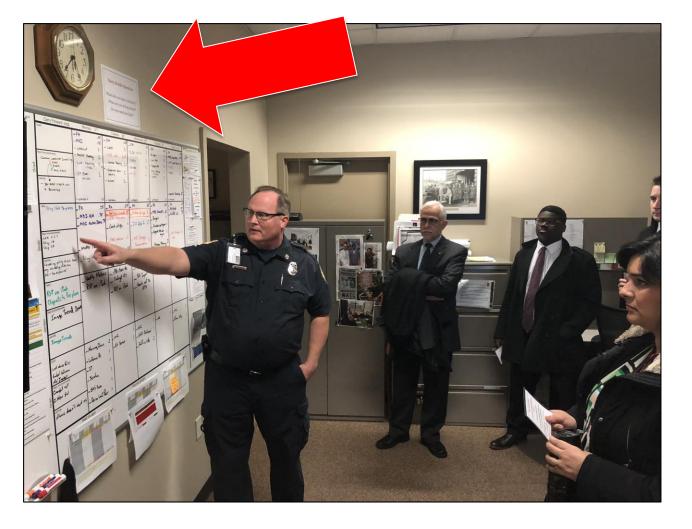








Huddles-Daily Questions





- What did you learn yesterday?
- What are you doing today?
- What help do you need?

There is a continual process of checking to make sure that what is done each day reflects the intentions, the targets, the vision of what the organization has agreed to pursue.

Akao, Y. (1991). *Hoshin Kanrin Policy development for successful TQM*. Cambridge, MA. Productivity Press.





Huddles-Why do we invest the time?



Huddles-Weekly Questions





Weekly Huddle Questions

- 1. What were your major accomplishments last week?
 - 2. What did you learn last week?
- 3. How does your work this week align with the strategic goals of the department?

(Turn Card Over) ————

4. Do you need any help?

Strategic Alignment Checklist

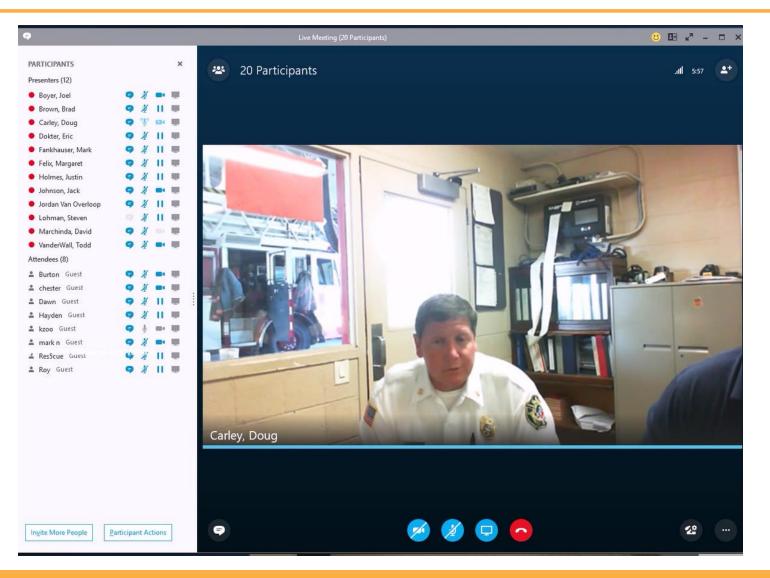
How does your work align with:

- ☐ City Sustainability Plan?
- ☐ GRFD Strategic Plan?
- ☐ GRFD Operational Plan?
- ☐ Monthly Work Planning?
 - ☐ Personal Kanban?

(Return to Question 4)



Daily Huddles







Skype used for geographically dispersed workforce

Personal Kanban

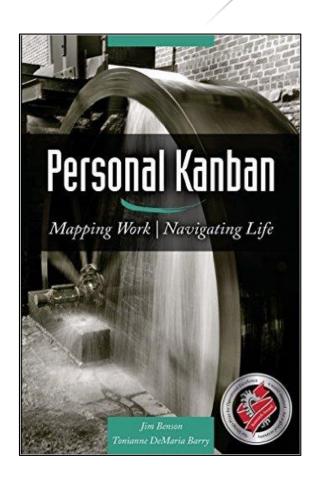




- A pull system to visualize workload and flow
- Easy to implement and maintain







How's it Going?







"Everything is awesome, everything is cool when you are part of a team, everything is awesome when we're living our dream"

From the Lego Movie



External Feedback

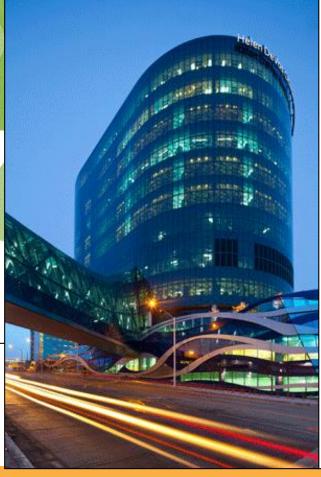




6/20/16



Thank You!



Brad & Team

Thanks so much for allowing us to visit and participate in your huddle on Monday morning. We are so impressed with the progress you guys have made on your lean journey. The positive engagement and contributions from each team member was orderly and valuable. In addition, the visual management tools across the department was a great sign of progress that we are striving to achieve soon. It was amazing to see the similarities even though our world's are very different!



External Feedback









Brad~ Many thanks for leating our Mercy Health froces Excellence team yesterflay! We greatly appreciate your timb and investment in our learning. This is definitely a journey for all if us, and we must rely on our learning partners! you have tackled some of the most outred + difficult elements - congratulations! Please oftend our appreciation to your amonging team of leaders to mo, the badaship and individual toam accountability is most individual toam accountability is most impressive! Thank you! mongy Duyton



Leading on the Edge





"If you want to understand how one organization can change the competitive rules of the game for an enti<mark>re industry, read this book."</mark>

—James L. Heskett, BAKER FOUNDATION PROFESSOR,
HARVARD BUSINESS SCHOOL and
Coauthor of The Value-Profit Chain

The Southor of The Value-Profit Chair Southwest Airlines

WINNER
of the Alfred P.
Sloan Foundation's
Industry Studies
Award

Way

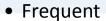
Using the Power of Relationships to Achieve High Performance

JODY HOFFER GITTELL

Structures

- Select and train for teamwork
- Shared accountability and rewards
- Shared conflict resolution
- Boundary spanner roles
- Team meetings
- Shared protocols
- Shared information systems

Relational Coordination



- Timely
- Accurate
- Problem Solving Communication
- Shared Goals
- Shared Knowledge
- Mutual Respect

Performance Outcomes

- Quality and Safety
- Efficiency and Finance
- Client Engagement
- Worker Engagement
- Learning and Innovation







Thank You!

Your opinion is important to us!

Please take a moment to complete the survey using the conference mobile app.

Session No: TS/14
Improving the Fire Department through Lean, Not Firefighting
Brad Brown

Grand Rapids Fire Department

bbrown@grcity.us

