



Suggestion Systems: The DNA of Continuous Improvement

Michelle Weber

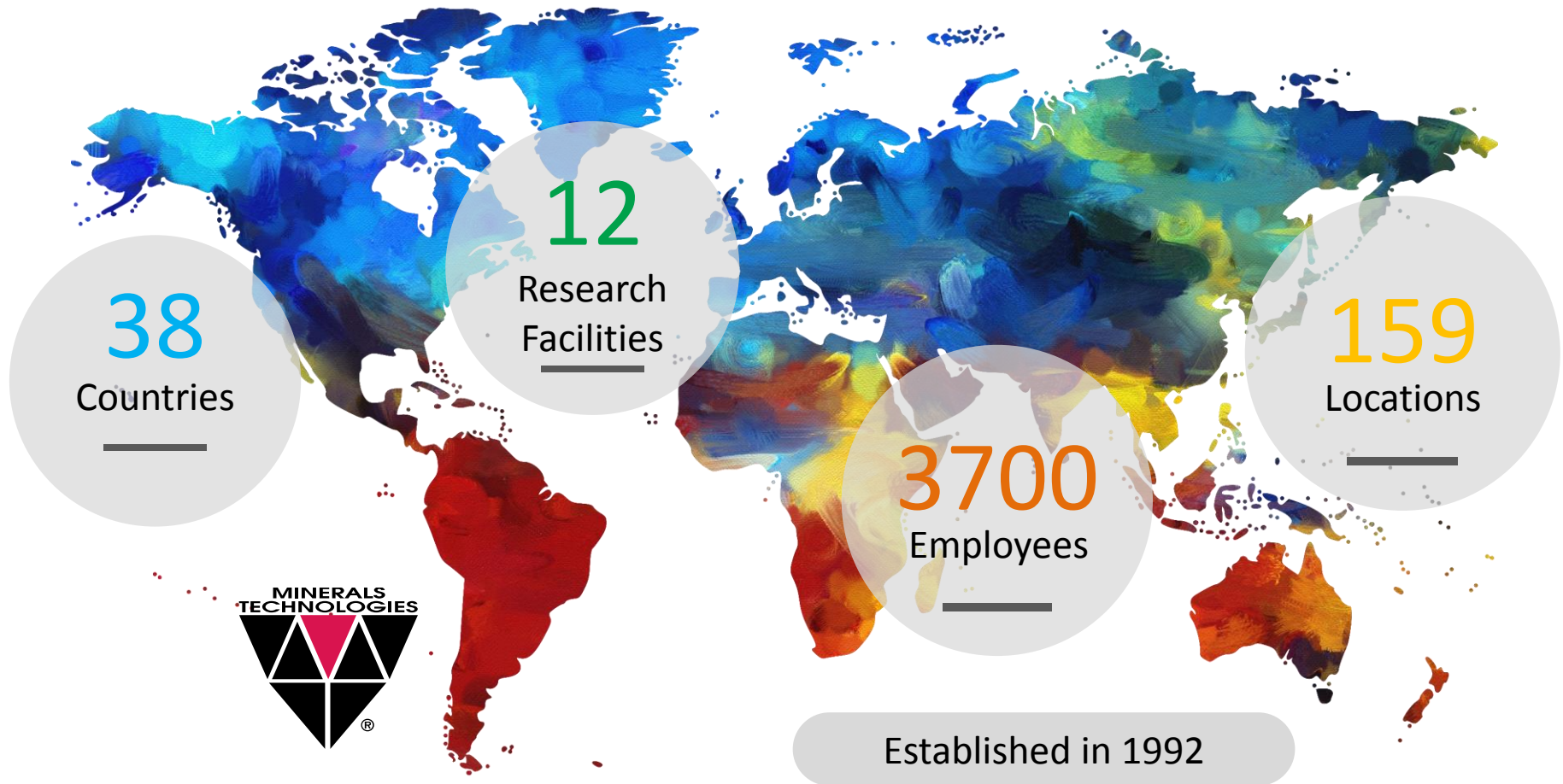
Plant Manager, Health and Beauty Solutions

Abbie Mouton

Quality Manager, Health and Beauty Solutions

MINERALS TECHNOLOGIES INC.





Minerals Technologies Inc.



Minerals Businesses



Specialty Minerals

- Paper PCC
- Performance Minerals

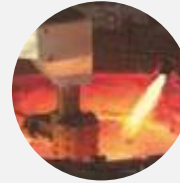


Performance Materials

- Metalcasting
- Household, Personal Care & Specialty Products
- Environmental Products
- Building Materials
- Basic Minerals



Service Businesses



Refractories

- Refractories
- Metallurgical Wire



Energy Services

- Off-Shore Services
- Filtration
- Well Testing





Today's Agenda

- 1 Our Goal and Importance of the Program
- 2 Design Parameters and Pilot Study
- 3 Key Principles to Drive Success
- 4 Local Suggestion Process and Examples
- 5 Global Suggestion Process and Examples
- 6 Program Challenges
- 7 Overcoming the Challenges
- 8 RESULTS— Return on Investment!



“One has to assume first, that the individual human being at work knows better than anyone else what makes him or her more productive . . . even in routine work the only true expert is the person who does the job.”

Peter Drucker ©



Suggestion System and Daily Kaizen

Levels of lean transformation — kaizen perspective

Shingo Model
levels of lean
transformation

Tool driven

Management planned kaizen for selected portions of a process without explicit linkage to strategic direction

System driven

Management and engineering planned kaizen is linked to company strategies and value stream imperatives. Kaizen employs the systemic elimination of waste, unevenness and overburden

Principle driven

"Spontaneous continuous improvement via project, event, or 'just-do-it' approach: sponsored by management, work team, or worker. Kaizen activity is part of everyday work." (Shingo Prize model 2009)

Kaizen event

Some kaizen events sub-optimize value stream performance. Occasional backsliding

Events are high leverage and integrated. Lean management systems prevent backsliding.

Predominate improvement activity, is daily kaizen (kaizen circle activities, 5S improvements, mini-events, employee suggestions, etc.)

+

Performance

-



OUR GOAL

Enhance and improve total productivity of operations

Establish a framework for our company to tap into its full resources by involving people at all levels of the organization directly



Establish a framework for our company to tap into its full resources by involving people at all levels of the organization directly



Creates a sense of ownership, awareness, and culture to drive a strong continuous improvement program

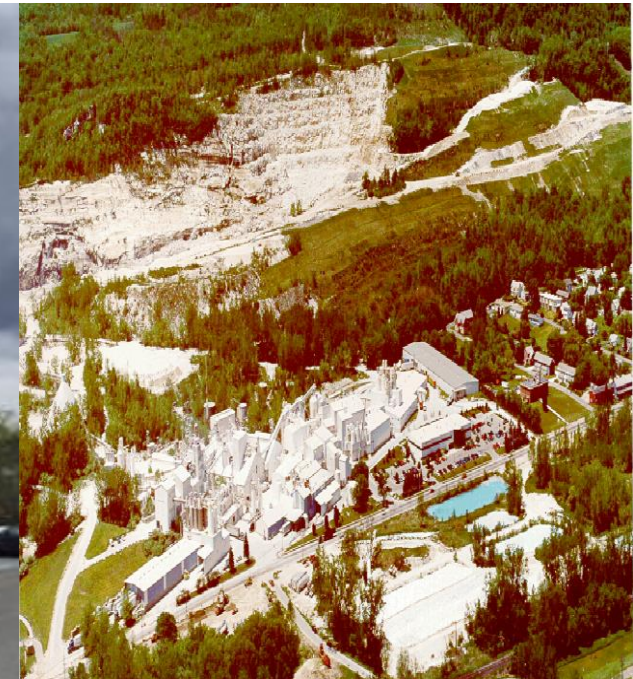


Ultimately to become **more competitive** in the global market



Suggestion System Pilot

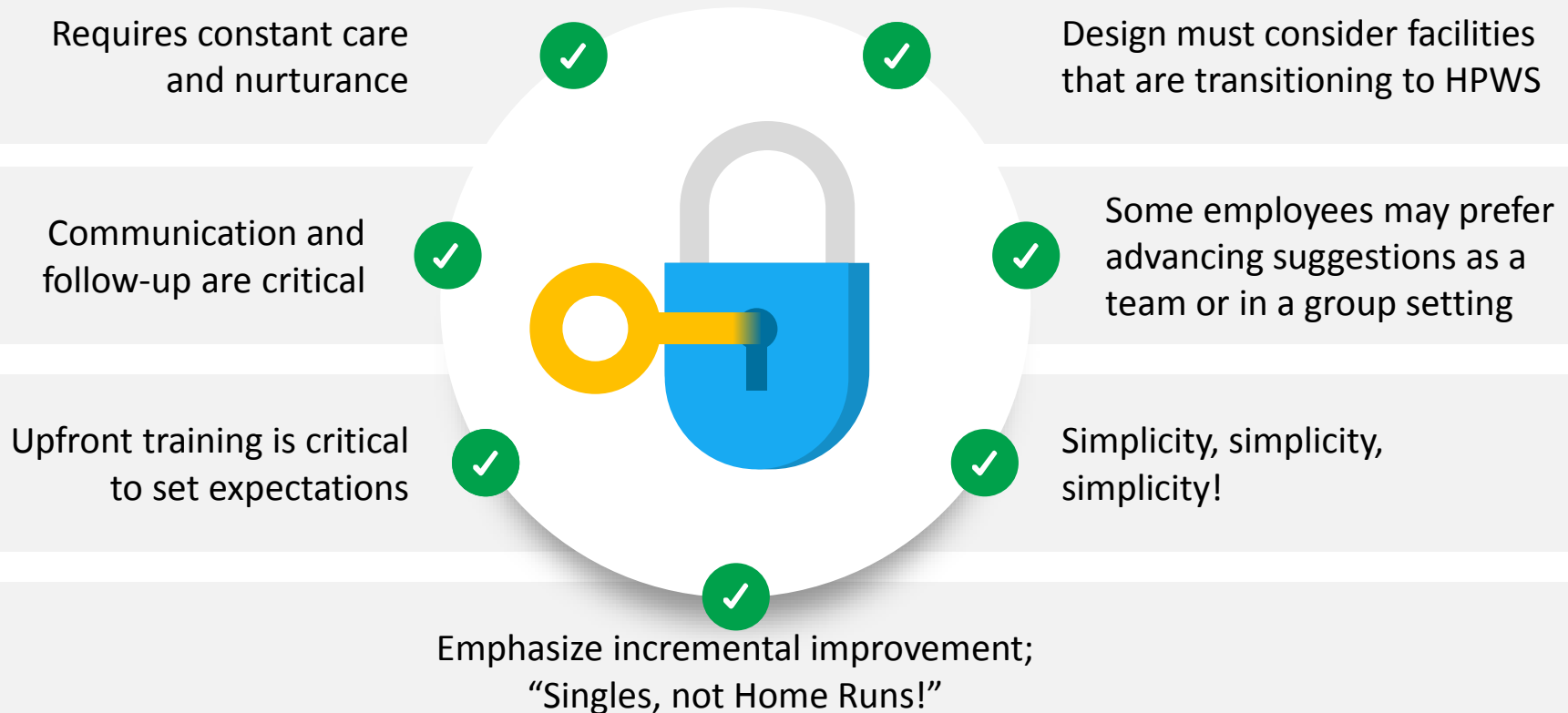
Case Study



Specialty Minerals –
Adams, Massachusetts



Key Learnings

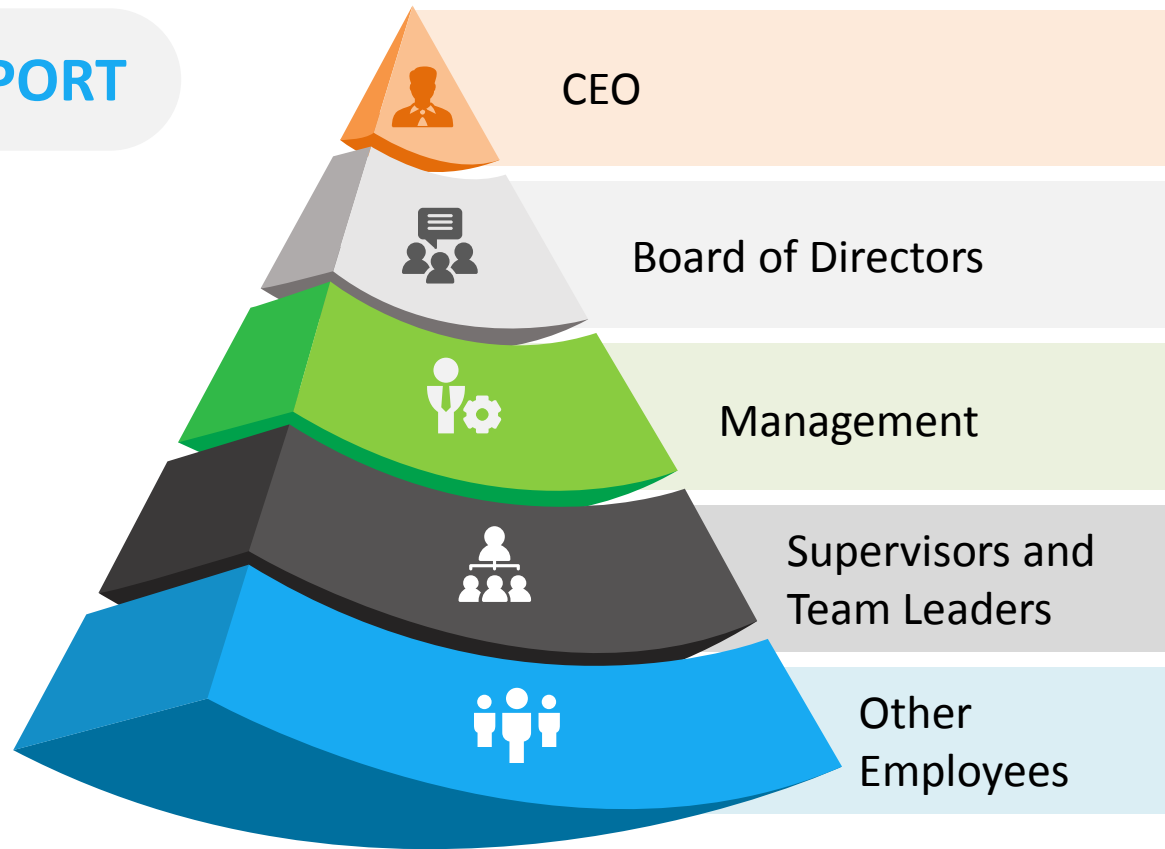




Key Principles to Drive Success

1 MANAGEMENT SUPPORT

- Strong visible support by senior leadership
- Commitment to the process
Promotes enthusiasm across organization
- Encouragement to support participation
- That “push” from all levels





Key Principles to Drive Success

2 SYSTEM DESIGN

- ✓ Design to “fit” the environment
- ✓ Involve all employees
- ✓ Be creative
- ✓ Build a **simple** standard process
- ✓ Make easily accessible, central location
- ✓ Launch for a *fun* program

Design Flexibility

KEEP IT SIMPLE

White Board



MAKE IT VISIBLE

Bulletin Board



MAKE IT ACCESSIBLE

Web Based



NO SUGGESTION BOX





Key Principles to Drive Success

3 TRAINING

WHY

- Purpose of the Suggestion System
- What is the goal?
- What are the expectations?
- Benefits of the program

HOW

- Understand how the system works
- What is a suggestion? -No bad ideas
- Small, easy to implement
- Incremental improvement
- Make it part of work!

WHO

- Who submits suggestions?
- Who implements suggestions?
- Great idea to assign “huddle” teams

WHERE

- Define central location of program
- Where do ideas come from?



What is an Idea?



Definition of Idea

A thought or suggestion as to a possible course of action for improvement

Action

Task completed as opportunities present itself

Part of Work

Activities we complete everyday to improve processes

Small Improvements

Incremental improvements that gradually move the business to its goals



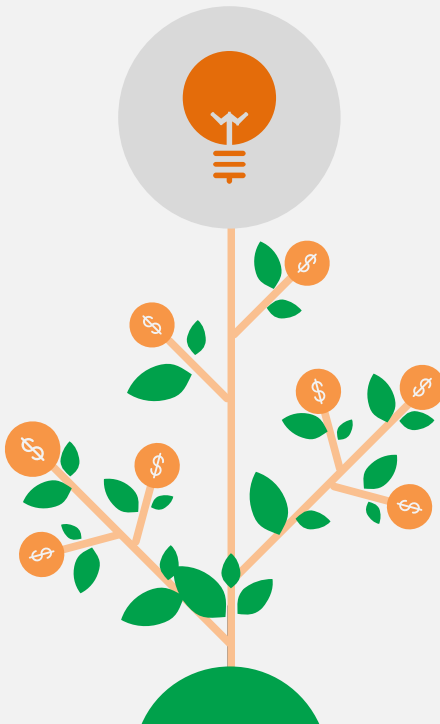
Where do ideas come from?



- Daily Management Meetings
- KATA
- Project Charters
- Cause Maps
- Shift Turnovers
- Buddy Visits
- Gemba Walks
- Phone Calls
- Kaizen Events
- PDCA
- Hallway Conversations
- Near Misses
- FMEA
- Incident Investigations
- Customer Audits
- Risk Assessments
- Fresh Eyes
- Casual Troubleshooting
- Internal Audits
- Complaints
- Customer Audits
- Benchmarking
- Reactive Maintenance
- Toolbox Talks



What is the purpose of a suggestion?



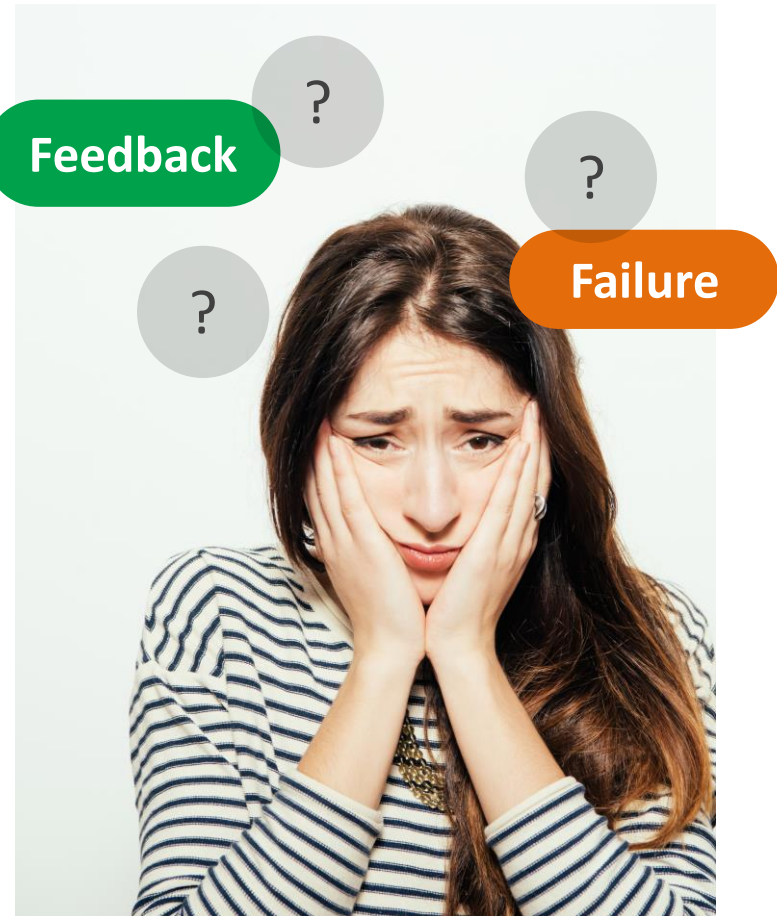
- Simplify the Process
- Minimize Inventory
- Prevent Breakdowns
- Improve Automation
- Fosters Learning
- Better Utilization of Equipment
- Enhances Customer Satisfaction
- Ensure Tidiness
- Lessen Movement
- Reduce Wait
- Add Innovation
- Prevent Pollution
- Reduce Risks & Prevent Hazards
- Improves Information Exchange
- Improve a Procedure



Key Principles to Drive Success

4 DEDICATED RESOURCES

- Allocate time
- Diverse cross-functional teams to execute the program
- Idea coaches
- Group communication and collaboration
- Quick responsiveness
- Make time for execution
- Minimize screening out ideas
“just do it”

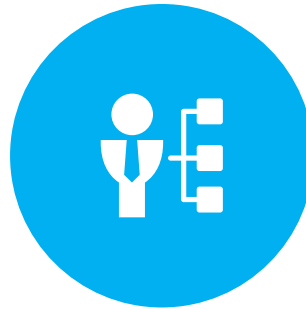




A Few Tips to Avoid Failure



No idea is a bad idea;
don't just reject idea;
understand the issue and
help find a solution;
provide feedback; keep
communication open



"Can the Committee" –
decision-making at the
lowest possible level in
the organization leads to
better decisions and faster
implementation



Get back to employees
quickly, evaluate and
respond; *Lack of
responsiveness is the #1
reason why suggestion
systems fail*



Key Principles to Drive Success





Key Principles to Drive Success

6 RECOGNITION

- ✓ Publicly spotlight good ideas & implementation successes
- ✓ Make sure employees understand the importance of ideas
- ✓ Say “thank you”





Key Principles to Drive Success

7
**LINK TO
CONTINUOUS
IMPROVEMENT**





Local and GSS Suggestion Systems

Local Suggestion System

Face-to-Face

Whiteboard

Bulletin Board

Idea Form (Paper)

PlantWeb



Suggestions that pertain to **work processes within facility, department or possibly business or resource unit**

Global Suggestion System

Online at MyMTI

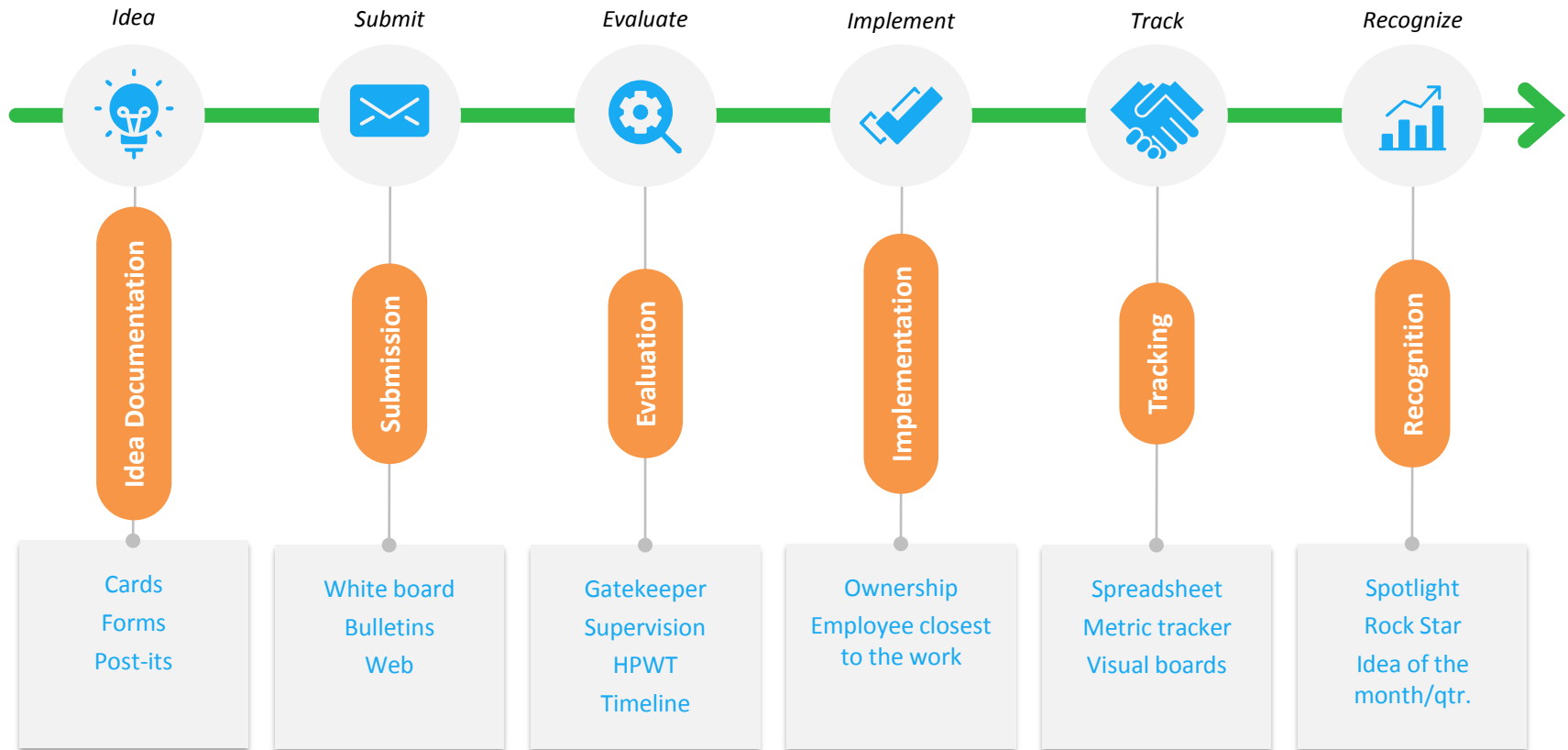
Corporate/international



Suggestions that pertain to **MTI overall**, or other ideas that can not be acted upon at the facility or department levels, or if the employee is not certain where to advance the idea



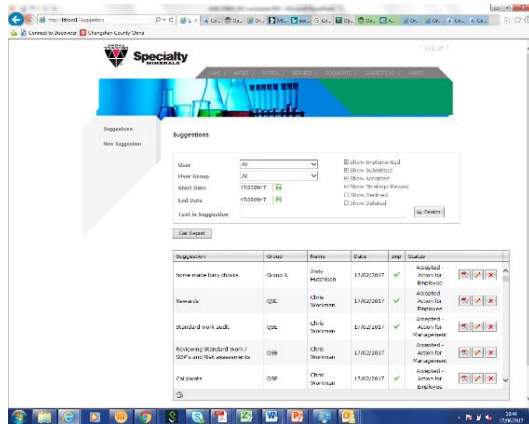
Suggestion System Process



It's about creating the tools for people to take action



Local Systems - Lifford, UK



EEs & managers submit ideas via Sharepoint forms; accessed via PC, iPad, Smart devices

Ideas are reviewed & feedback returned within 24 hours

Ideas are posted on Daily Management Control boards

Implementation of ideas is discussed during DMC review & monthly operations meetings

3 Suggestions per EE
Implementation Rate of 71%

Staff Suggestion Counts
01/01/2017 - 17/08/2017

Name	Submitted	Accepted	Strategic Review	Currently Declined	Total Suggestions	Implemented
Adam Kelly	6	22	5	3	36	9
Alan James	2	7	0	0	9	2
Andy Gordon	1	2	1	0	4	4
Andy MacIsaac	6	18	5	2	31	13
Andy Payne	6	13	0	0	19	8
Andy Hunsdon	6	7	1	3	17	3
Au Ali	6	9	6	2	17	7
Bill Jones	6	6	1	0	13	0
Brandon Glenon	6	6	1	1	14	4
Brandon Glenon Jr	2	5	4	1	12	1
Brandon Wicizinski	1	2	2	2	7	2
Brian Davies	1	0	0	0	1	1
C Greenhouse	6	5	1	0	12	4
Carol Kirkpatrick	6	6	0	0	12	1
Chris Workman	6	5	0	0	11	3
Cole Vines	1	2	1	0	4	1
Dennis Green	6	7	0	1	14	5
Derek Green	6	1	1	0	8	0
Dennis Green	6	2	0	0	8	2
Denny James	6	5	8	0	19	2
Gemma Jones	6	12	0	0	18	7
James Vile	1	1	0	0	2	0
Jeff Greenhouse	6	5	5	3	19	1
Mark Forthright	6	8	2	0	16	5



Local System - Lovell, Wyoming



SUGGESTION FOR IMPROVEMENT

NAME: Ryan Robinson Location: _____
 Job: _____

State the problem, idea or concern

Fall risk on elevators

Describe your proposed solution

Install fall arrests on elevators that can work with our harness

Who will or what is the benefit?

Whoever climbs the elevators

Suggestion tracking spread sheet						Done	Looking into or in progress	Not going to happen		c
Suggestion	By	Safety	Received	suggestion #	Location					
Compressor room: Install curtains from field lab to wall	Cleve Wilson		1/3/2017	1	PM					
Roads are rough behind ACC & Cetco / buy a blade	Chris Allen		1/3/2017	2	Both					
Cameras need moved in the mill room & f.b. inlet auger	Chris Allen		1/3/2017	3	PM					
Move broom closer to label area.	Dayna Zertuche		1/3/2017	4	CT					
Install a heater for the Voltex table.	Cody Clark		1/3/2017	5	CT					
Build blocks to prevent scissor lift from falling.	Chris Harrison	X	1/3/2017	6	CT					
Compressor room: Install air diverters to let heated air into the room.	Cleve Wilson		1/3/2017	7	PM					
Compressor room: fix hole in the east wall.	Cleve Wilson		1/3/2017	8	PM					
Compressor room: door on east side needs replaced.	Cleve Wilson		1/3/2017	9	PM					
Compressor room: replace door on southside.	Cleve Wilson		1/3/2017	10	PM					
Lower the heater by the re-roll table.	Angel Paz		1/3/2017	11	CT		Done			
Mill: upgrade fan when replaced.	Travis Nichols		1/3/2017	12	PM					
Move bag house to end of last airslide.	Travis Nichols		1/3/2017	13	PM					
Fix or replace scale on storage tanks belt so it will shut off with interlock.	Chris Wilkerson		1/3/2017	14	PM					

EEs & managers submit ideas via forms and Post-it notes

Ideas are entered into an Excel spreadsheet for tracking

Implementation of ideas are discussed during daily Gemba walks

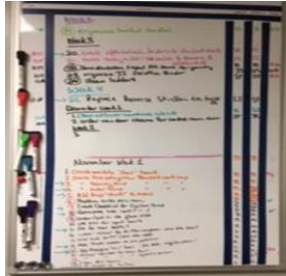
Metrics & support needs are discussed in monthly meetings

Results are posted via Visual Management Boards

3 Suggestions per EE/month
67% Implementation Rate



Local System - Troy, Indiana



Ideas are collected onto a white board, includes submitter & submission date

Weekly gatekeeper reviews, subject matter expert assigns target completion



Ideas are opened & closed in an Excel spreadsheet for tracking

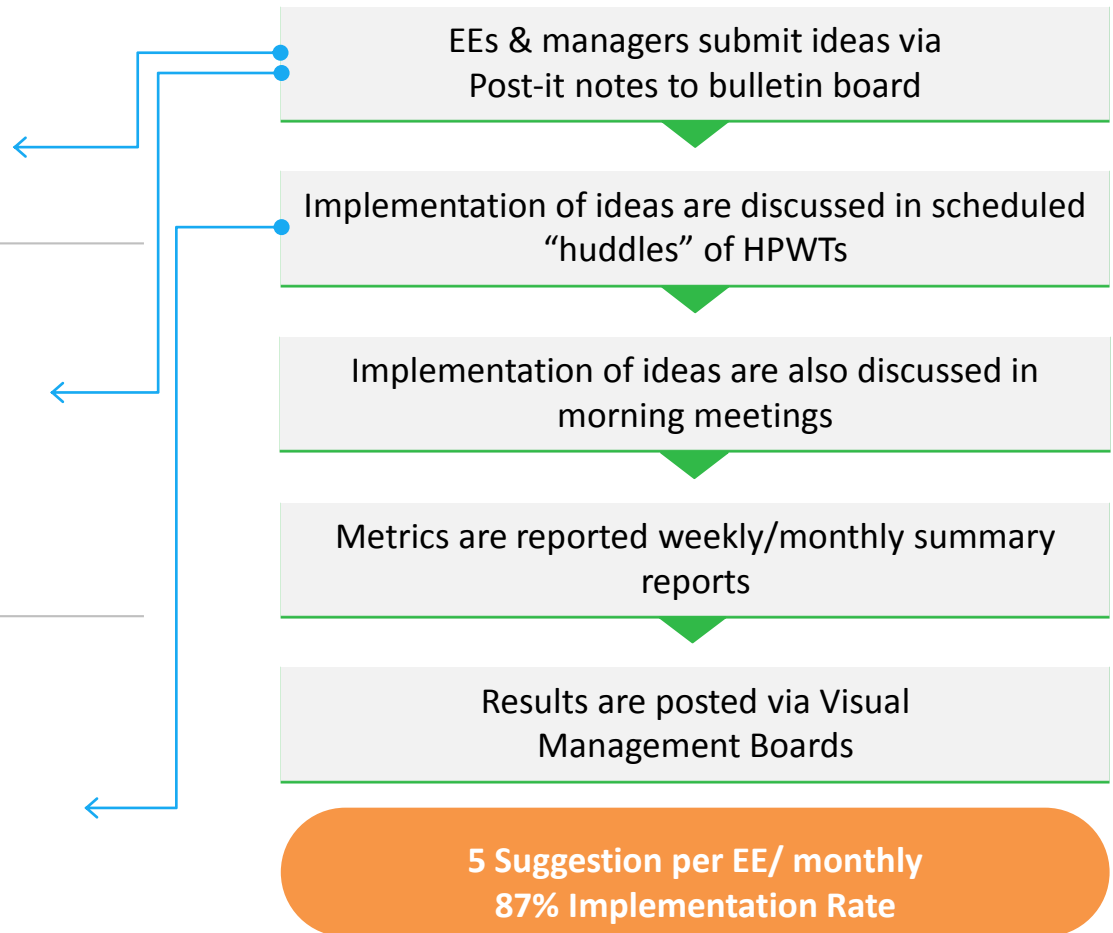
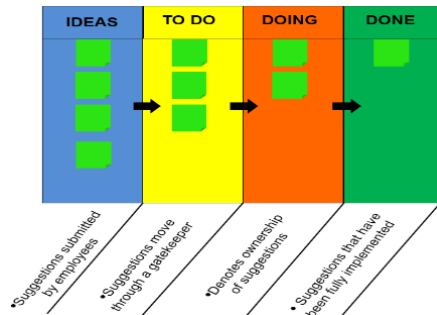
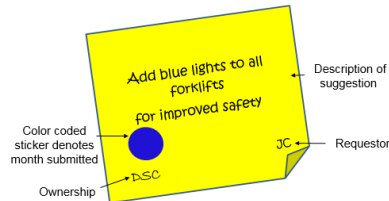


Results are posted via Visual Management board

4 Suggestions per EE/month
77% Implementation Rate



Local System - HBS, Lafayette





Local Systems - LV, California

Lucerne Valley Suggestions

Find Record

Area Number:

Date: Source:

Event Name:

Area: Category:

Name: Priority Code:

Suggestion

☐ MES Item
☐ Makt Item
☐ MII Item

Lucerne Valley
GEMBA ACTION ITEM
(LV-GE-01, Rev 2)

Date: 5/24/16

Area: SIALROOM

Priority: (page 5 4 3 2 1 low)

Expected Completion Date:

To be Completed Today ☐

Category

☐ Cost
☐ Delivery
☐ Labor
☐ Quality
☐ Safety
☐ Future
☐ Kaizen

Issue / Gap:
Flatbed load this morning and MWJES
500 pallets not available. LARRY WAS
LINO NOT READY?

Root Cause: Assigned to: RALPH

Corrective Action: Assigned to:

Preventive Action: Assigned to:

EEs & managers submit ideas via multiple form types

Ideas are logged into Microsoft Access database for tracking

Ideas are posted on Daily Management Control boards

Implementation of ideas is discussed during DMC review and monthly meetings



3 Suggestions per EE/month
78% Implementation Rate



MTI Global Suggestion System

EEs submit ideas via electronic form linked on MyMTI website

Number of suggestions collected : **5970**



83% Implementation Rate

SPAs are assigned & notification emails are sent out

Ideas are reviewed by SPA & implementation is scheduled

Ideas are tracked electronically on MyMTI website and status notifications are emailed

GSS submission & implementation #s are reported out monthly

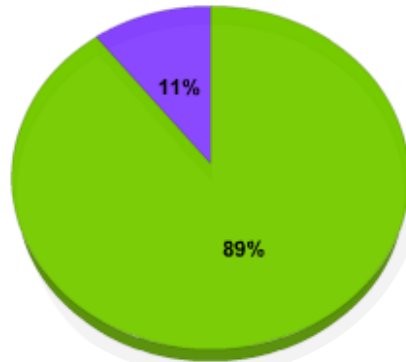
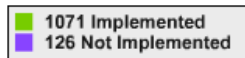
The screenshot displays the MTI Global Suggestion System interface. At the top, there's a navigation bar with the Minerals Technologies logo and links for 'Contact Administrator' and 'Login (Admin Use Only)'. Below this is a 'Global Suggestion System' header. A 'Submit a New Suggestion' button is visible on the left. The main area features a table of suggestions with columns for Idea Number, Status, Submitted, Name, SPA, Type, Assignee, Location, and Keywords. A legend indicates status colors: Green for Open, Yellow for Tabled, Red for Closed, and Blue for Implemented. A 'SPA Quick Edit Instructions' section is on the left, and a 'View By Business Unit Only' section lists various units like All, MI, MTI, PCC, PMIN, PMAT, CT, and ES. The table shows several suggestions, mostly from Mike Edmonds, with statuses ranging from Open to Implemented. A 'View By Idea Type Only' section is also present, listing types like Recycling, BRT, Energy, CT Field, and Operations.

Idea Number	Status	Submitted	Name	SPA	Type	Assignee	Location	Keywords
9455	Open	06/29/2017	Mike Edmonds	Finance	Finance		USA-Easton	TELEPHONE SAVINGS
9456	Open	06/29/2017	Mike Edmonds	Finance	Finance		USA-Easton	SAFETY
9457	Open	06/29/2017	Mike Edmonds	Finance	Finance		USA-Easton	SB
9458	Open	06/23/2017	Mike Edmonds	Finance	Finance		USA-Easton	SAFETY
9459	Open	06/23/2017	Mike Edmonds	Finance	Finance		USA-Easton	RELIABILITY
9460	Open	06/23/2017	Mike Edmonds	Finance	Finance		USA-Easton	AD MIGRATION
9461	Open	06/23/2017	Mike Edmonds	Finance	Finance		USA-Easton	AD MIGRATION
9462	Open	06/23/2017	Mike Edmonds	Finance	Finance		USA-Easton	RELIABILITY
9463	Open	06/23/2017	Mike Edmonds	Finance	Finance		USA-Easton	Pyro Departments
9464	Open	06/23/2017	Mike Edmonds	Finance	Finance		USA-Easton	Ad migration
9185	Open	05/22/2017	Amy Caroline Stauffer	Finance	Finance		USA-Bethlehem	Travel policy
9149	Closed	05/17/2017	Christine Mauro	Finance	Finance		USA-Bethlehem	New Hires Communication

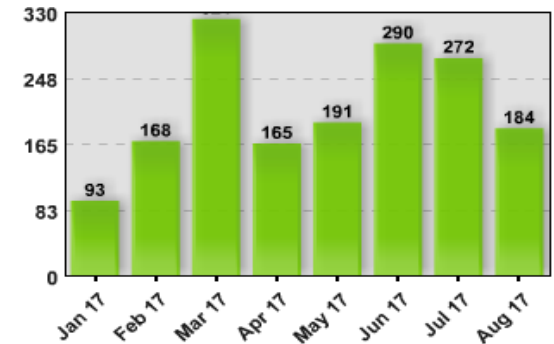


Global Metric Tracking and Graphics

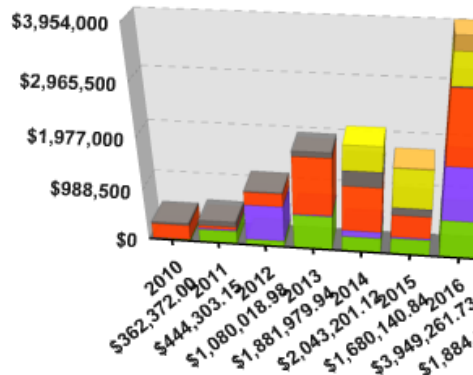
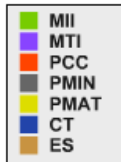
GSS Implemented Ideas 2017



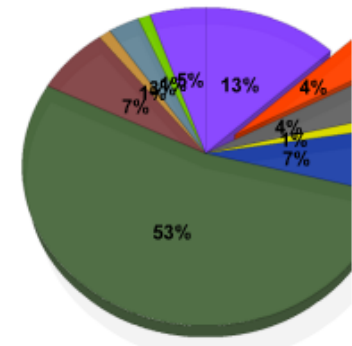
GSS Ideas: 1684 Ideas Submitted During 2017



ERT Savings per BU by Year



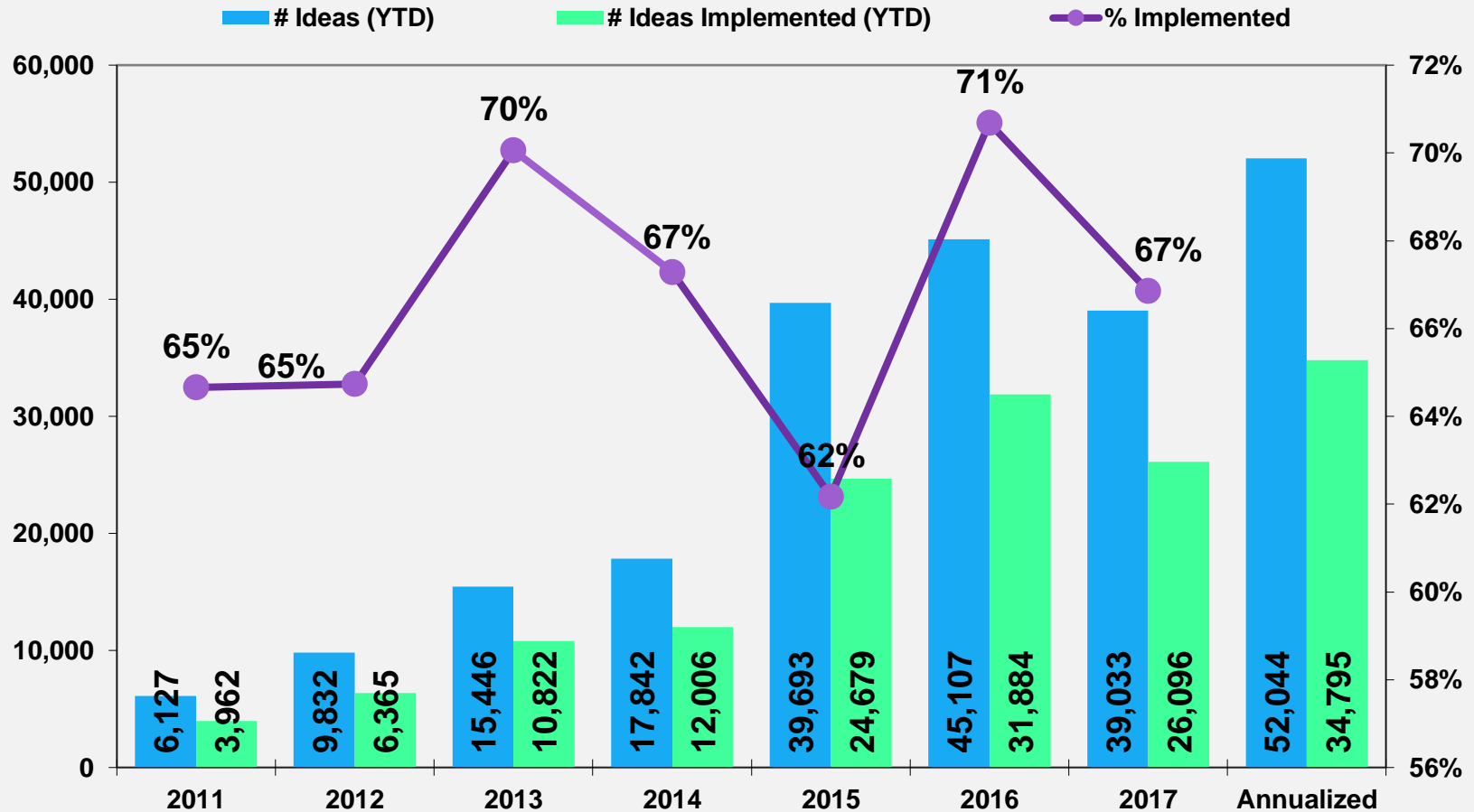
ERT Idea Categories 2017





Global Suggestion System

Total Suggestions – Advanced and Implemented





Program Challenges



Orienting employees to their OWN job;



Emphasizing the value of incremental improvement;



Responding to ALL suggestions in a rapid manner



“No heaving over the wall to others!”



Getting ALL comfortable with target of 2x per month;



Participation

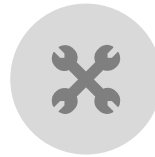
- Fostering a culture of free expression of ideas
- Manager/Employee Trust relationships
- Employees feeling disenfranchised because their voices are not heard
- Perception that small ideas aren't valuable
- Complexity slows down productivity of the system
- Failure to make time to participate
- Failure to prioritize across the organization
- Lack of organizational transparency



Overcoming Challenges



Creating an avenue for daily communication to provide transparency



Implement small ideas which may not directly improve business



Coaching provides cohesiveness of the program



Success



Benefits of our Suggestion System



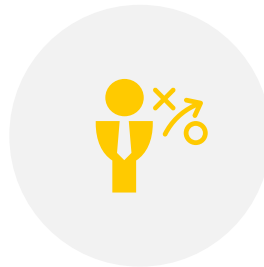
- Simplifies our jobs
- Improves quality and efficiency of products
- Eliminates Waste
- Reduces Cost
- Helps improve Service and Customer Satisfaction
- Improves Profitability
- Promotes Self Development
- Boosts problem solving, teamwork and communication
- Employee empowerment, ownership, sense of achievement and improved morale



GET ENGAGED!



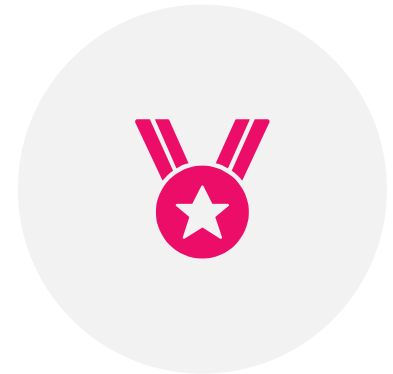
Promote



Coach



Participate



Praise



REPEAT...



ROI- 2017



- Over 53,000 suggestions made in 2017, 18% increase YOY
- Current idea implementation rate of 69%
- Over 6000 Kaizen events completed around the world, which translates to 10 of these every day
- A productivity improvement of 6%;
- Earnings per share increased by 3%, on a 2% increase in sales
- Operating Margins increased by 2%
- LTAs reduced by over 22%



CONCLUSION



Continuous improvement through employees' suggestions represents an incremental, ongoing process as one small invention is added to another.



When a constant stream of small improvements flows from all employees, a powerful forces is set into motion.



The suggestion system is one of the most powerful Lean tools that an organization can adopt



References:

- › *Ideas Are Free, How the Idea Revolution Is Liberating People and Transforming Organizations, Alan G. Robinson & Dean M. Schroeder*
- › *The Idea Generator, Quick and Easy Kaizen, Bunji Tozawa and Norman Bodek*
- › *40 Years, 20 Mission Ideas, The Toyota Suggestion System, Yuzo Yasuda*



Thank You!

Your opinion is important to us!

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

Session No: WS/21

Suggestion Systems: The DNA of Continuous Improvement

Michelle Weber/Abbie Mouton

Minerals Technologies Inc.

Michelle.weber@mineralstech.com

Abbie.mouton@mineralstech.com