

Approaching world class manufacturing..” *connecting the dots*”

By
Subba Bangera.
At
TECNOMMERCE 2014
1st March 2014.

How do we define a world class manufacturing unit?

Any unit which is capable of manufacturing and servicing its goods in consistent quality at lower cost and fastest speed and in full can be defined as world class lean unit.

World class lean enterprise (WCLE)

Q- Quality
C- Cost
E- Execution
OTIF- On time in full

Six Sigma

OTIF

Lean



Lean & Six Sigma

***LEAN ESTABLISHES THE STANDARD.
SIX SIGMA REMOVES THE DEVIATION FROM THE STANDARD.***

Lean addresses continuous improvement, Five S, waste identification and elimination, work place organization, vendor relationships, visual factories, error proofing, process standardization, culture changes, physical arrangement of the facility.....

All of that promotes and ensures an efficient, synchronous flow of products and information throughout the organization.

Six Sigma and its tools are used to resolve any negative deviations from that standard.

So with the complement of Lean and six sigma, the proverbial bar is perpetually raised.

Lean and Six Sigma are for any process in the organization, not just for manufacturing. To be lean Six Sigma company, managers must address all processes, from the factory floor to customer service.

5 S

- **Sifting**- We have to check everything in the work area and remove everything that was not required to do the job. We have to look at the flow of the work and organize the tools and components in such a way as to ensure safety and reduce walk and wait time in the process.
- **Sorting**- Each operator would be responsible for defining the location for his or her tools and equipments.
- **Sweeping and washing**- Every team or individual must take pride in sweeping and washing every surface in the work area and labelling all the items for semi permanent storage.
- **Standardize and Self-Discipline** would come with time and effort naturally.

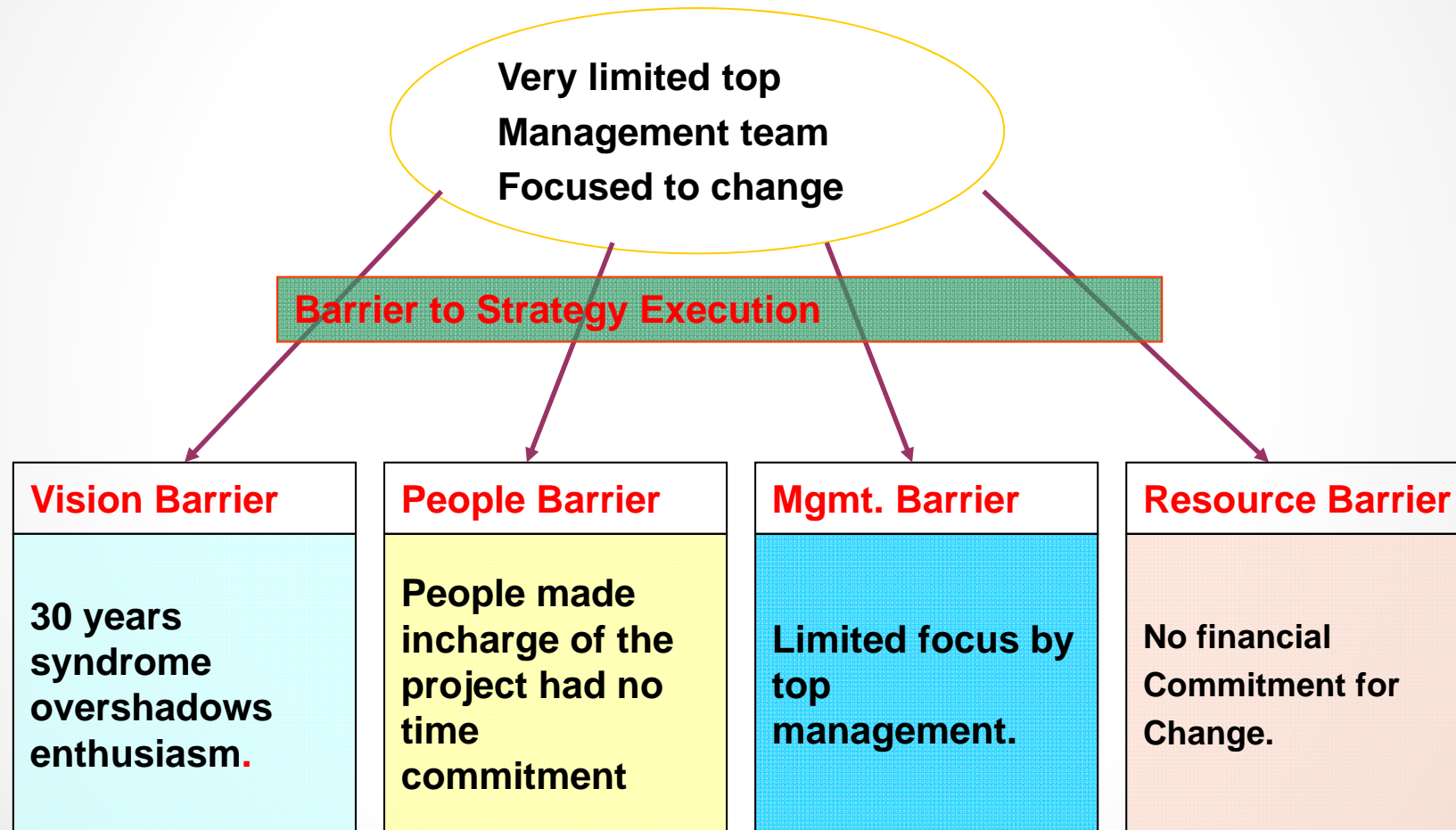
The goal of the Five S process would be to identify what was required in the work process and what if anything was missing at a glance.

Five S implementation is the first step toward a successful Six Sigma integration. It gets everyone on board and excited about change and solving problems in the organization from within.

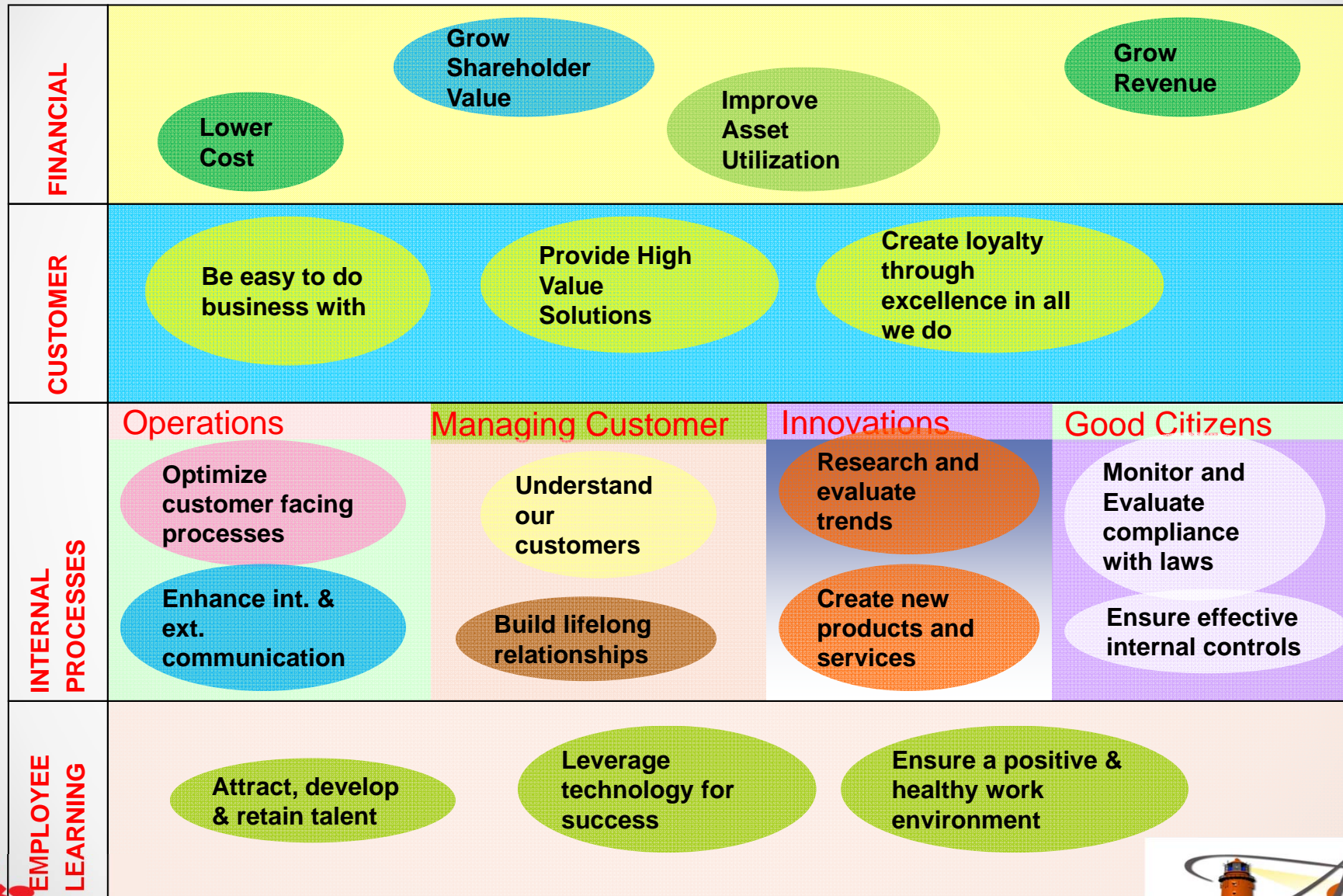
Listening to the Process

- Watching the process will allow you to see waste in the system. You can not find the problems from a computer terminal or an office. Look for things that are not required for the value added activities of the tasks being performed.
- Often, improvement opportunities are pushed aside as being impossible before they are fully investigated because the historic knowledge of the organization will not accept the possibility.
- If employees are not trained to identify waste, they will adopt non-value added activities such as rework, as part of the process – even going so far as to write the steps of rework into their standard process documents.
- Often the problems have become so embedded in the process that they are not even realized as waste. If an organization is to achieve Six Sigma, employees must be trained to look for waste in every aspect of their jobs.

BARRIER TO IMPLEMENTING STRATEGY



Approaching world class manufacturing - *CONNECTING THESE DOTS.*



Approaching WCLE..” *connecting the dots*

HARD PART-----SOFT PART

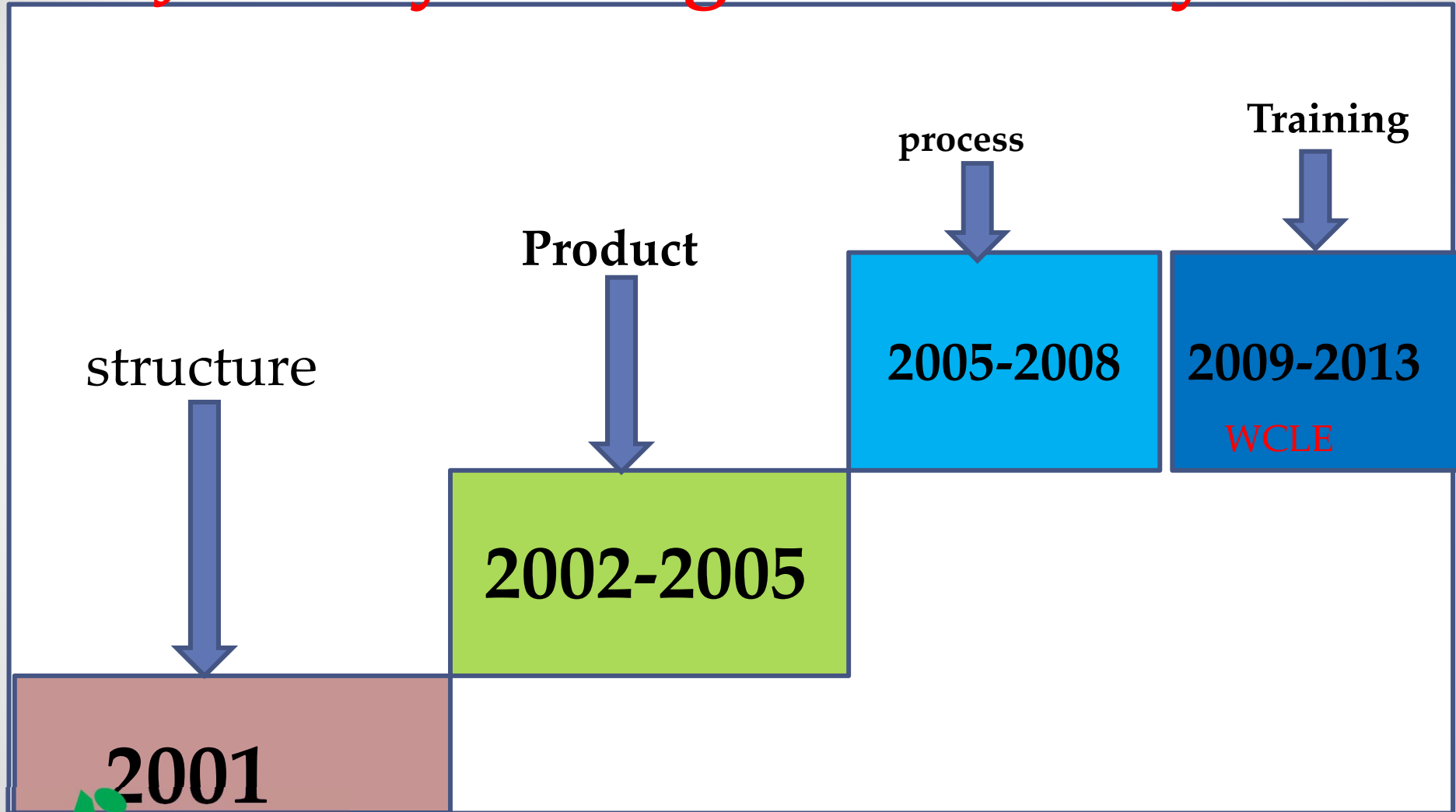


- PLANT
- MACHINERY
- TOOLS
- INFRASTRUCTURE



- PEPOLE
- IT/HR POLICIES
- HSE TRAINING
- INSURANCE
- HOLIDAYS
- LTEB

Journey through – real story.



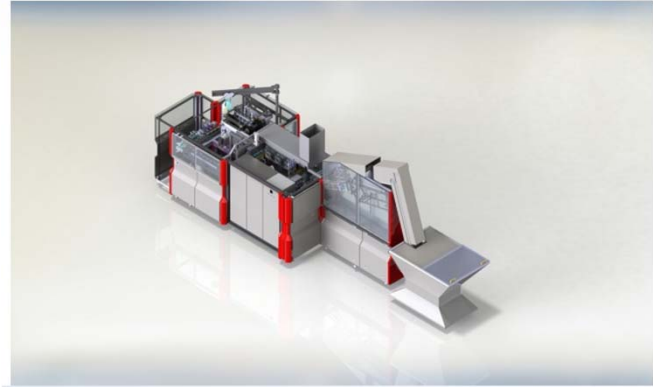
TRANSFORMATION



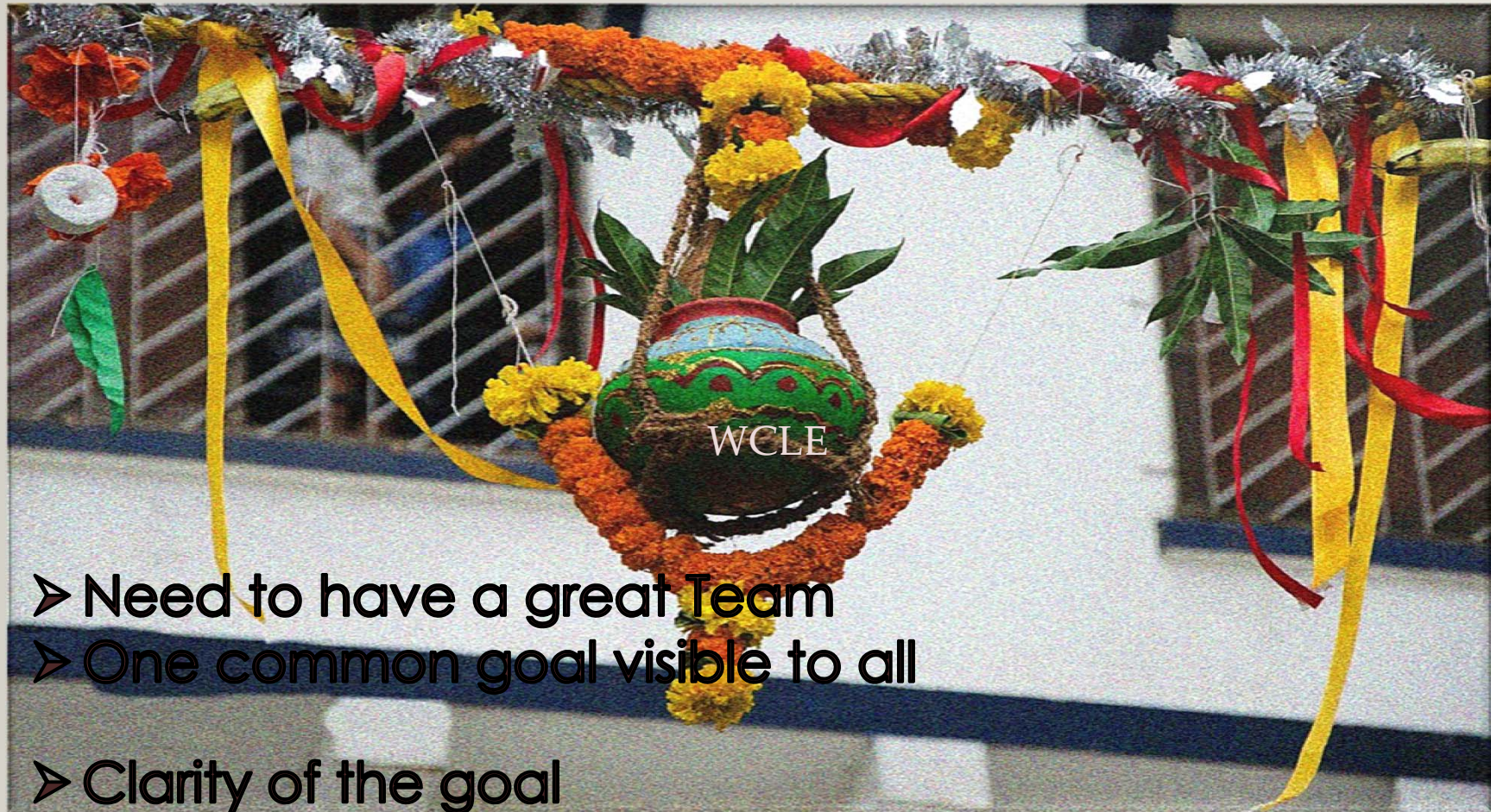
S
A
M
E

T
E
A
M

I
N
V
O
L
V
E
D



PLAN TO REACH THERE



- Need to have a great Team
- One common goal visible to all
- Clarity of the goal

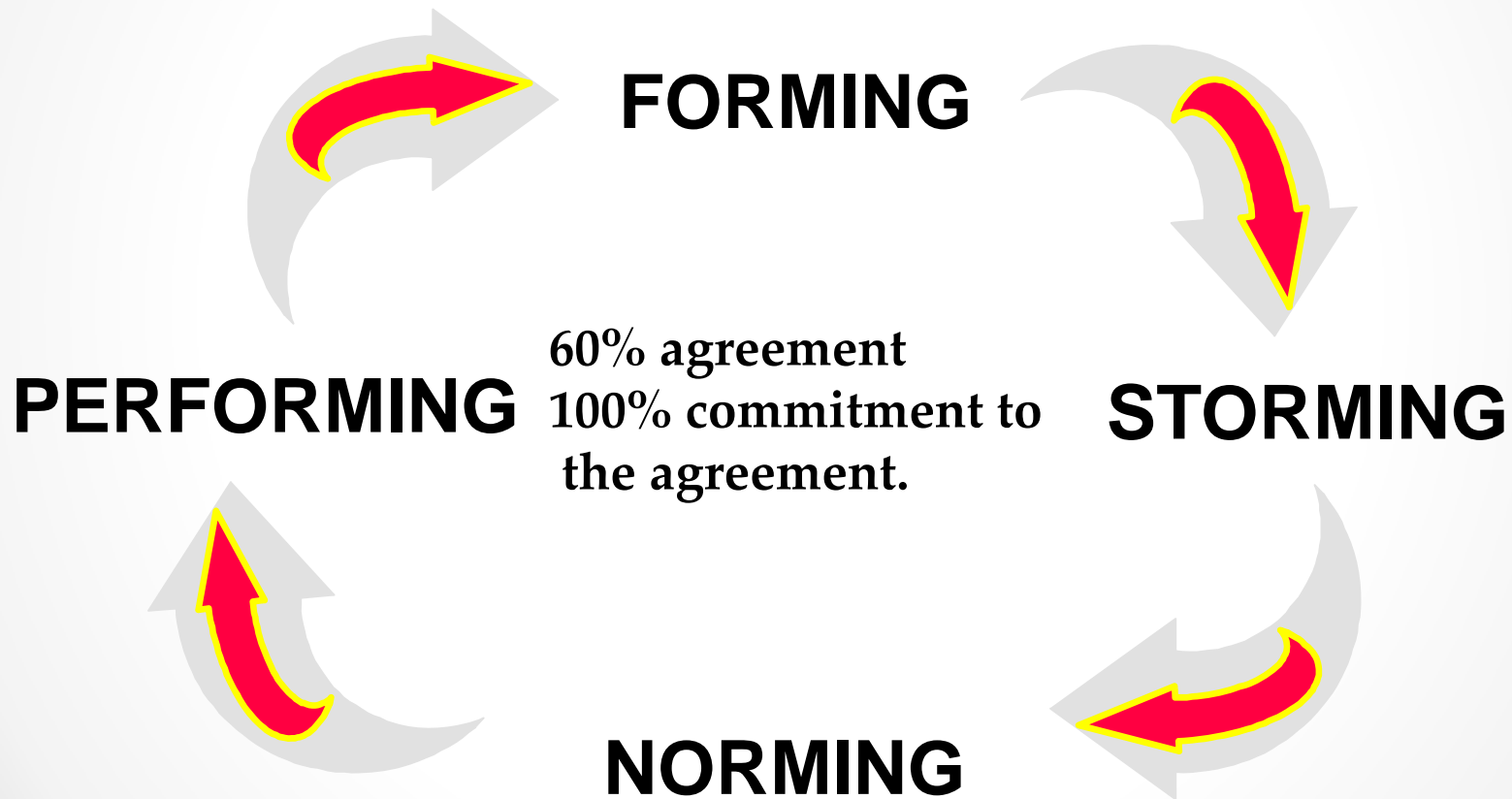


*Trust Your Team
Mates To Their Job*



RIGHT MAN FOR THE RIGHT NEED NOT BE THE BOSS.....

STAGES OF TEAM DEVELOPMENT



APPROACHING WORLD CLASS MANUFACTURING.....?

High Tech and High Touch Approach.

People should **flow** with your ideas & program and

NOT

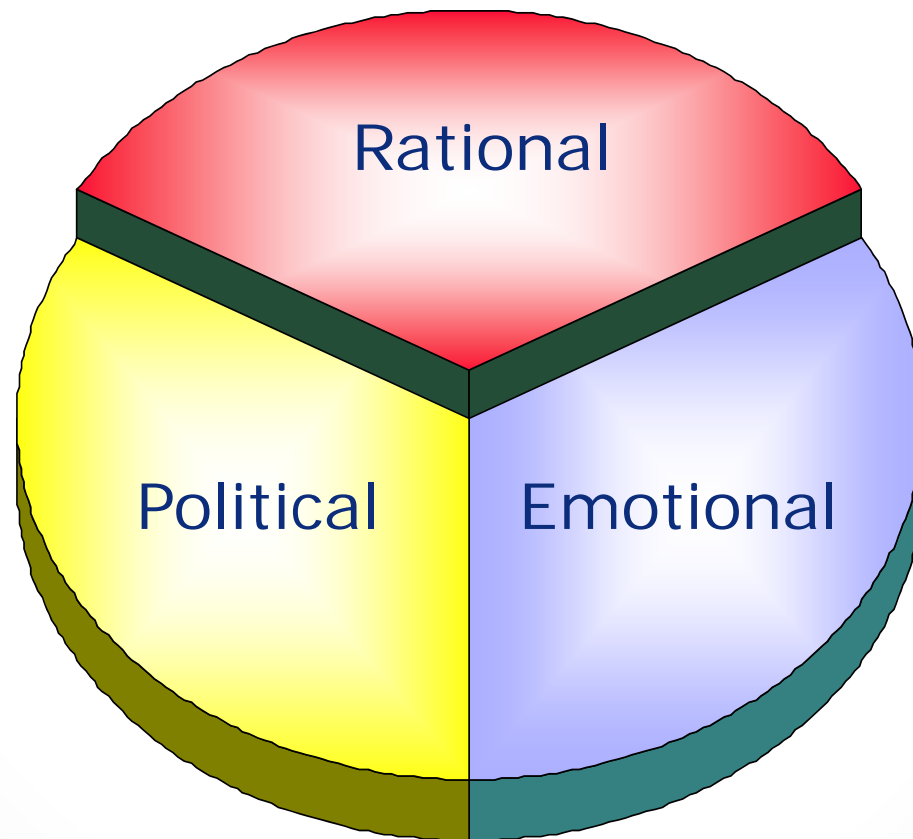
Forced to **Follow** Your Ideas

30 years syndrome is restraining force.

Exposure and examples is the best foot forward

Communication in correct language and
sequence

Resistance to change essentially comes in three forms



We must know how to identify them to control them.

Successful management procedure

- Daily meeting-shop level
- Weekly operation review-managers.
- Monthly-senior manager .
- Quarterly-board level.
- Yearly – shareholders & annual review budgeting.

Strategy planning

- Business review
- Competition review
- Defined gaps
- Work shops and initiatives
- New product development strategy(NPD)
- Customer satisfaction survey .
- Rewards & recognition

Management team

Managers	Leadership Team						
	Core Members						
	Key Functional Managers						
	Support Functional Managers						

PROCESS: FLOW



PRE-ASSEMBLY

FINAL ASSEMBLY

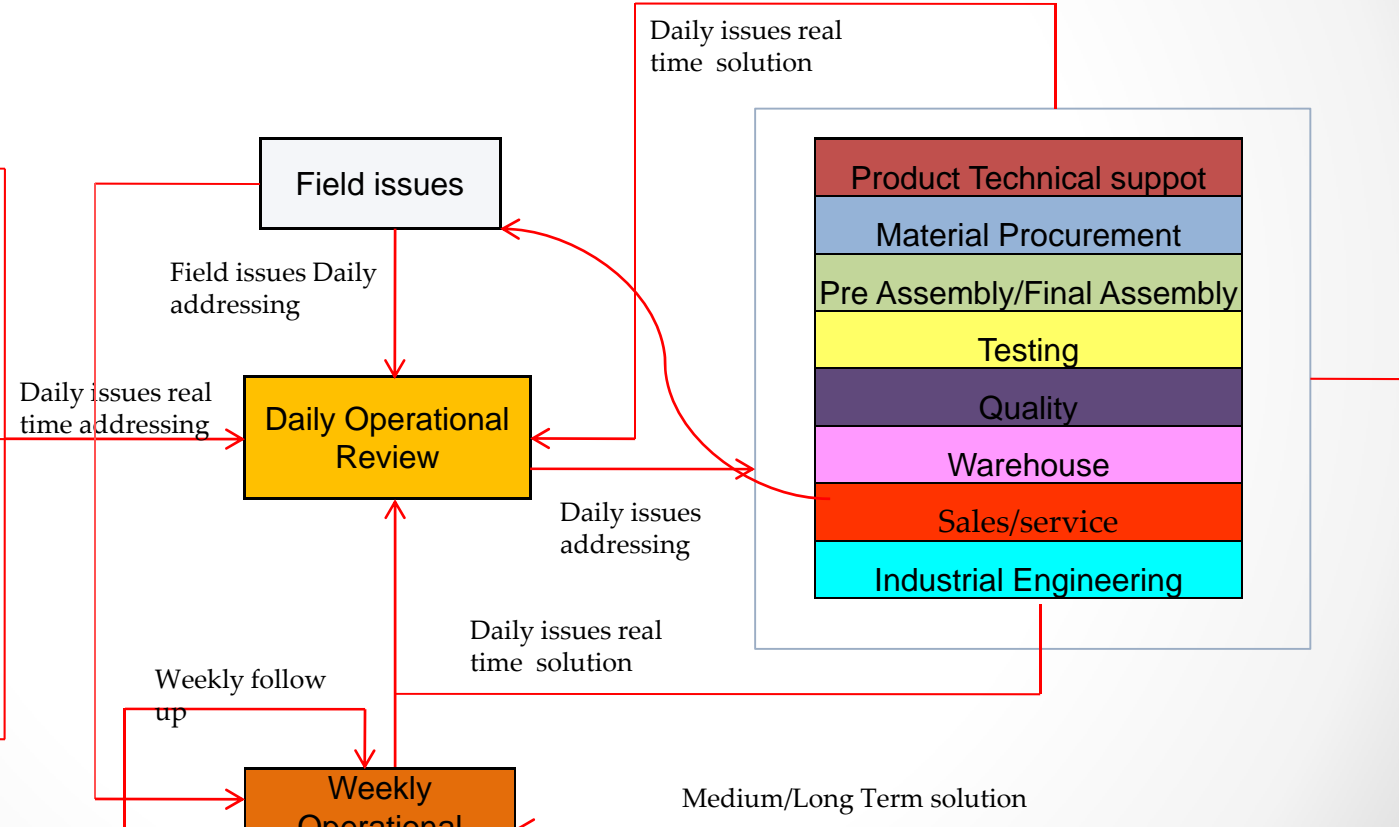
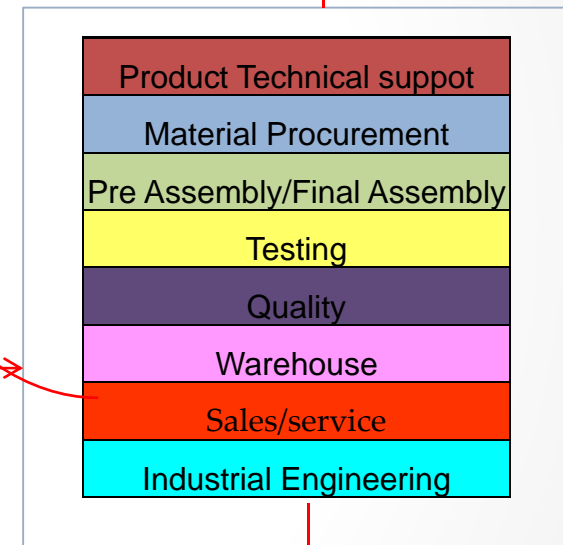
TESTING

Field issues

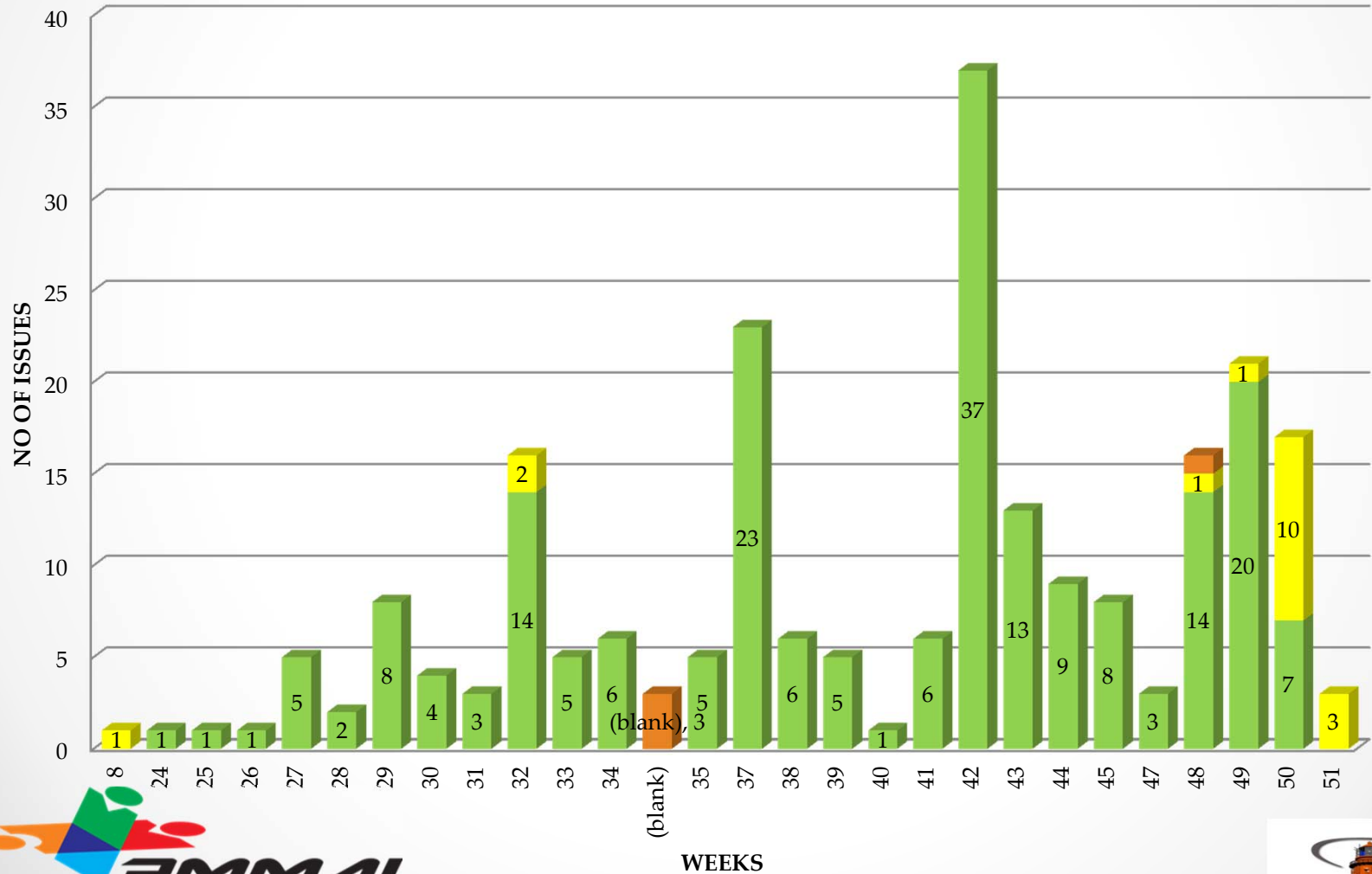
Daily Operational Review

Weekly Operational Review

Monthly Operational Review every month end day 30

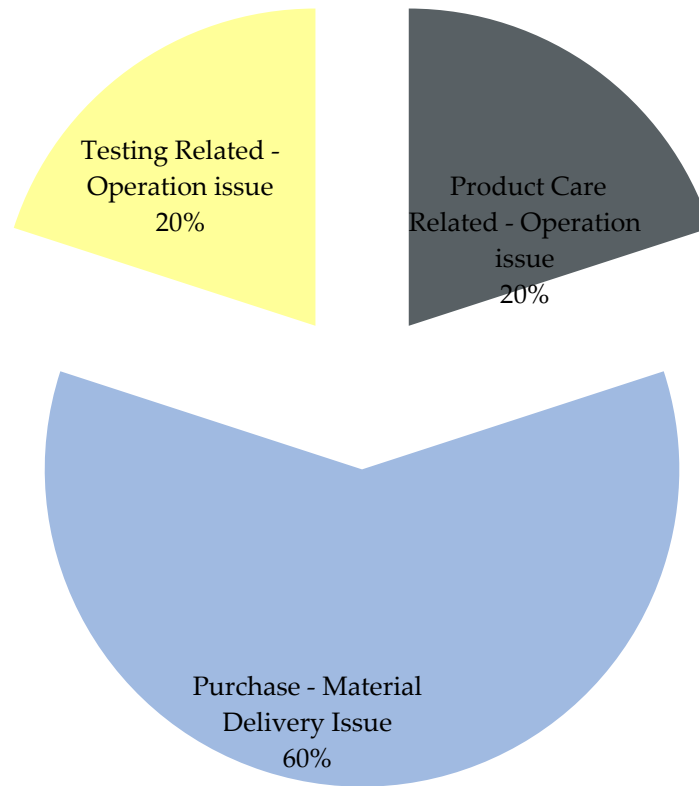


On Going Vs Closed Issues Per Week



METRICS AND KPI's

WOR ISSUES



PROCESS: RACI

Work Shop Environment

PRE-ASSEMBLY/FINAL ASSEMBLY			
R	A	C	I
Bhavin	raju	GM	COO

TESTING			
R	A	C	I
Mamu	All testing team	Dev	GM

WOR Room Environment

DAILY OPERATIONAL REVIEW			
R	A	C	I
Raju	One person of each function	Khanna.	GM

WEEKLY OPERATIONAL REVIEW			
R	A	C	I
Khanna.	WOR team	GM	COO

WOR TEAM
Khanna(LEADER)
DEV
YOGI
BHAVIN
KUMAR
HARSHA
Mamu
RD
RAMU
 CORDINATOR :-GM/COO

R- Responsible
A- Actor
C- Consultant
I- Informed.

Operations Environment

PRODUCT TECHNICAL SUPPORT			
R	A	C	I
Dev	P.C. team	COO	R&D/GM

MATERIAL PROCUREMENT			
R	A	C	I
Yogesh D	M.P.team	GM	COO

TOTAL QUALITY			
R	A	C	I
WOR team	All quality team	GM	COO

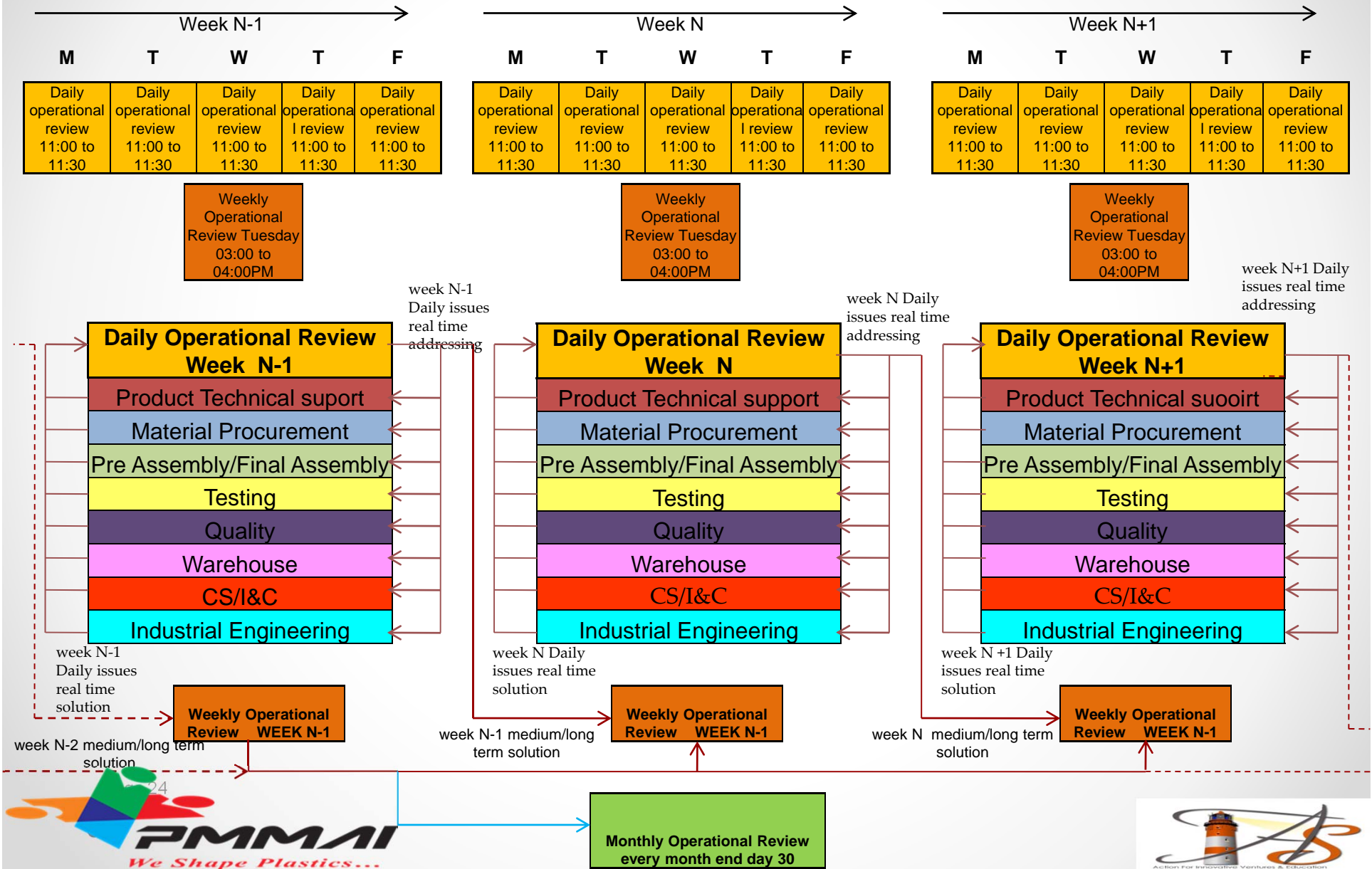
WAREHOUSE			
R	A	C	I
Chitti	All store Team	GM	COO

CUSTOMER SERVICE / INSTALLATION AND COMMISIONING			
R	A	C	I
Mamu and Ramu	team	Dev	COO/GM

INDUSTRIAL ENGINEERING			
R	A	C	I
Khanna	Dev	COO	GM

PRODUCT INNOVATION			
R	A	C	I
RD.	Chandu	GM	COO

PROCESS: DAILY AND WEEKLY MEETINGS



People Assessment

Assessed	25 people
Sourcing	05
Product Management	10
Project Management	02
Quality	02
Finance	06

Results : Sourcing (05)

Name				IDEAL MODEL	ran	Laxman	Bharat	Shatru	Ravan
Location				XXX	Patna	Patna	Baroda	Delhi	Mumbai
Current Job				S. Leader					
Current Report				YYY	Rajesh	mahesh	Divesh	Jayesh	Shailesh
Skill Group	Skill	Weight	Weight	I-Score	Score	Score	Score	Score	Score
Process	Lead Change Management	Critical	9	9	4	5	4	4	4
Process	Data oriented	Very Important	6	9	6	6	4	4	7
Process	Problem Solving	Very Important	6	9	4	6	4	4	5
Process	Project Management	Very Important	6	9	3	5	3	3	3
Process	Sourcing Processes Knowledge	Important	3	9	4	6	5	3	5
Process	Stakeholder Analysis	Important	3	9	6	6	4	5	5
Process	Supplier Management	Critical	9	9	4	6	4	4	4
Process	Skilled in Lean, 6Sigma	Important	3	9	1	1	1	1	1
Leadership	Accountability	Critical	9	9	4	6	4	3	5
Leadership	Autonomy	Very Important	6	9	4	6	4	3	6
Leadership	Communication	Critical	9	9	4	6	3	3	3
Leadership	Customer Focus	Critical	9	9	5	6	4	4	4
Leadership	People Coaching	Important	3	9	6	6	4	3	5
Leadership	Global mindset	Critical	9	9	4	6	4	3	5
Leadership	Personal Organization	Very Important	6	9	5	6	4	3	5
Leadership	Oriented to Results	Critical	9	9	5	9	4	4	5
Leadership	Team Work	Critical	9	9	6	6	4	6	5
Sourcing	Contract management	Important	3	9	4	5	3	3	3
Sourcing	Marketplace analysis	Very Important	6	9	3	5	3	3	4
Sourcing	Negotiation management	Critical	9	9	5	6	4	3	5
Sourcing	Request For Quotation Managemen	Very Important	6	9	6	6	4	3	5
Sourcing	Sourcing Innovation	Very Important	6	9	3	3	4	4	5
Sourcing	Sourcing strategy Definition	Critical	9	9	3	3	3	3	3
Sourcing	Sourcing strategy Implementation	Critical	9	9	3	3	4	3	5
Sourcing	Supplier audit and qualification	Important	3	9	3	6	5	3	5
Personal	Mobility	Important	3	9	1	1	1	1	1
Personal	Travel	Very Important	6	9	1	6	3	3	3
Personal	Ability & Willingness to progress	Critical	9	9	4	6	5	6	6
TOTAL SCORE				9.0	4.1	5.5	3.8	3.6	4.5

Closness to required skills

100%

45%

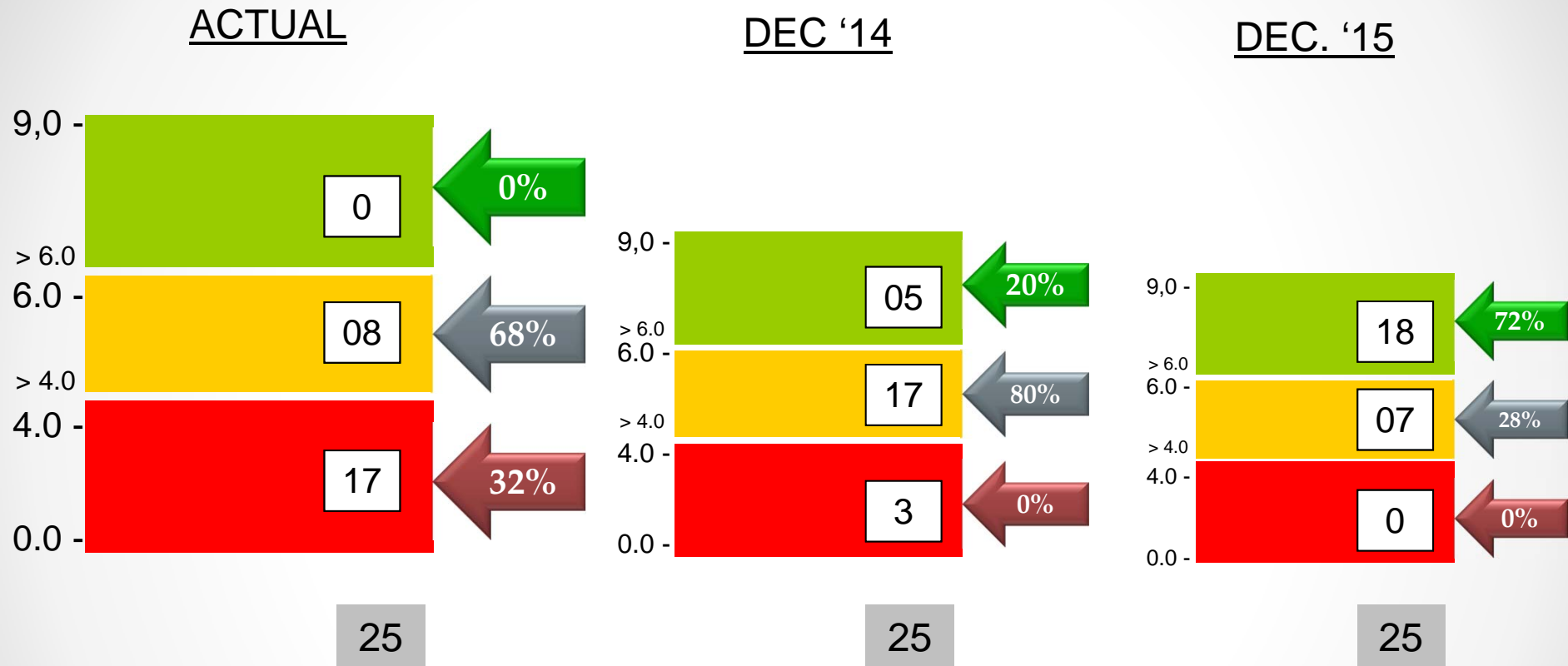
61%

42%

40%

People Assessment

Results: TOTAL SUMMARY ASSESSMENT



- To have productivity improvement , competence increase by 10% seems realistic.
- To have such large swing in competence dedicated mentorship, support and monitoring is required.

Management techniques followed.

- **Paradox Management**- It has become part and parcel of my life.
- **Management by exception**- adopted exceptionally within the organization.
- **Value innovation**- For product development and retrofit
- **Intrepreneurship**- A solid step to keep the brains working.
- **Strategy canvass**- It is the foundation of our product development strategy.
- **Co-creating dialogue with customers**- New value creation Paradigm.
- **Intelligent Disobedience**- Most practiced principle today.



Health/Safety/Environment(HSE)

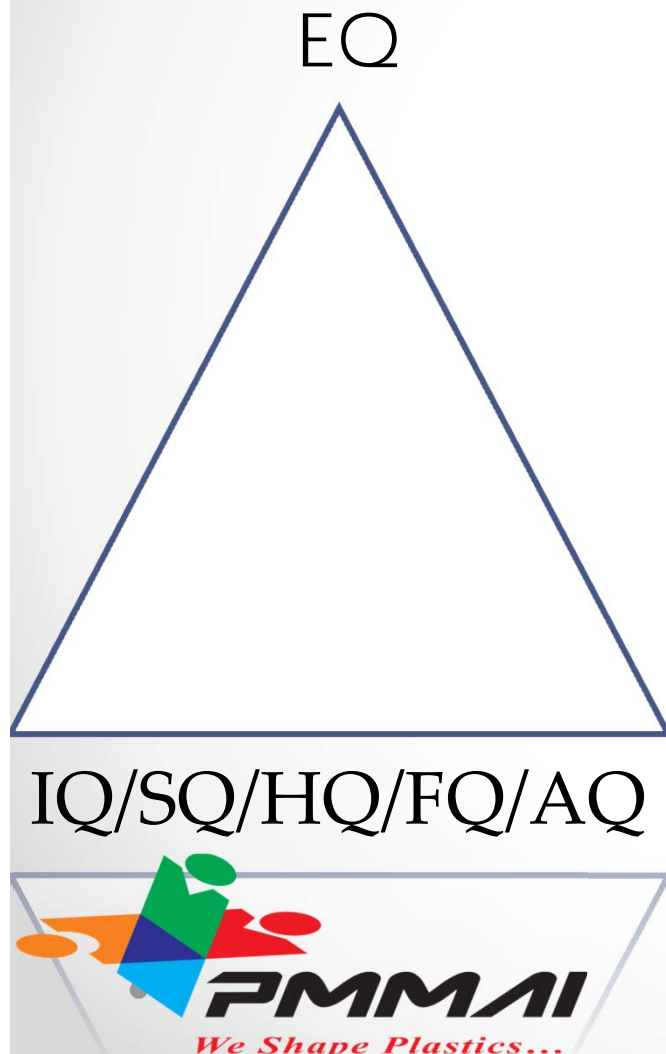
Key to world class HSE are,

- Drinking water/eye wash/ Hand wash/ clean air
- Fire Fighting Training
- Monthly reporting of HSE activities.
- Tree plantation – 3 trees/person
- 2 days a week holiday/ long Diwali weekend
- Annual medical checkup and corrective actions.
- Workplace to LIFE relation improvement.



Team Behavior

(to understand what your colleagues actually do)



IQ –Intelligence

SQ-Spiritual

HQ-Health

FQ-Fun

AQ-Adventure

EQ-Emotion

Sāmbhar Philosophy





Business model for LONG TERM sustainability.

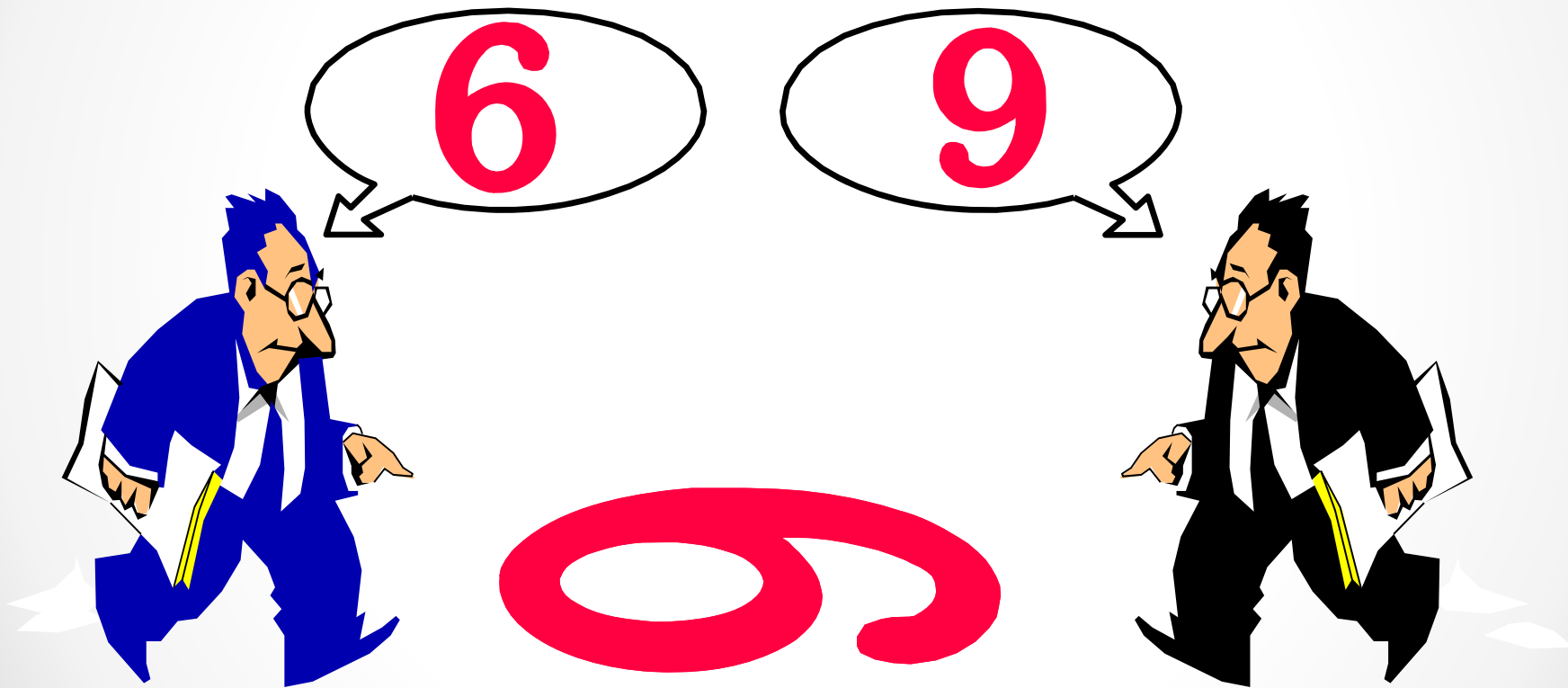
- **America is too strong in marketing-** even colored water can be packaged as lifestyle product.
- **Europe is strong in process and system.** Hence successful in machinery business and project execution.
- *Bottom line - System is getting too much shackled by processes slowing the project capability and adoptability of changes.*
- **China-** moving towards factory of the world situation. Everything China builds is big.
- *Bottom line- China has to pay too much in the coming years for the environment damage.*
- **India-** Needs to follow the balanced approach.
- *American marketing model with added CSR model for environmental care.*
- *European Process orientation but with trimming the shackles*
- *Chinese cost as benchmark.*
- *The Indian industrial model will more to suit SME business. (Small and medium Enterprises)*
- *Products to suit ESR capsules. (Elite/Snobbish/Rural)*

VISION without
ACTION is dreaming

ACTION without **VISION** is random
activity

VISION and **ACTION** together
can change the world.

I OWN THE PROBLEM

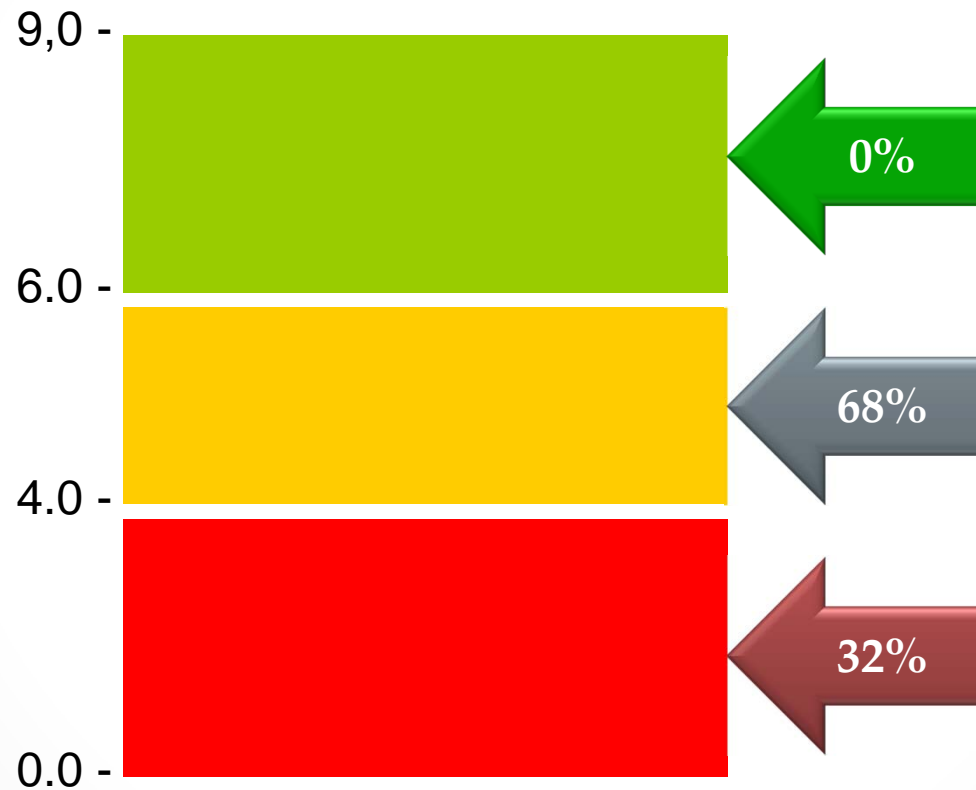


HOW WE SEE THINGS



Organization Assessment

Results: (25 people)



Who Are We?

- Project Consultancy
- Training & Mentoring
- Marketing Support & Strategies
- Designing – Product & Machine

You Can reach us at :

hello@activesolutions.co.in





Action For Innovative Ventures & Education

THANKYOU