Vrunda Consultancy Services

PULSE : ABC Company

*A **P**roductive **U**tilization **&** **L**ean*

*appra**i**S**al* ***for*** ***E**nterprises*

Diagnostic Report :

ABC Manufacturing Pvt. Ltd.

Submitted on : 25th Aug 2014

CONTENTS

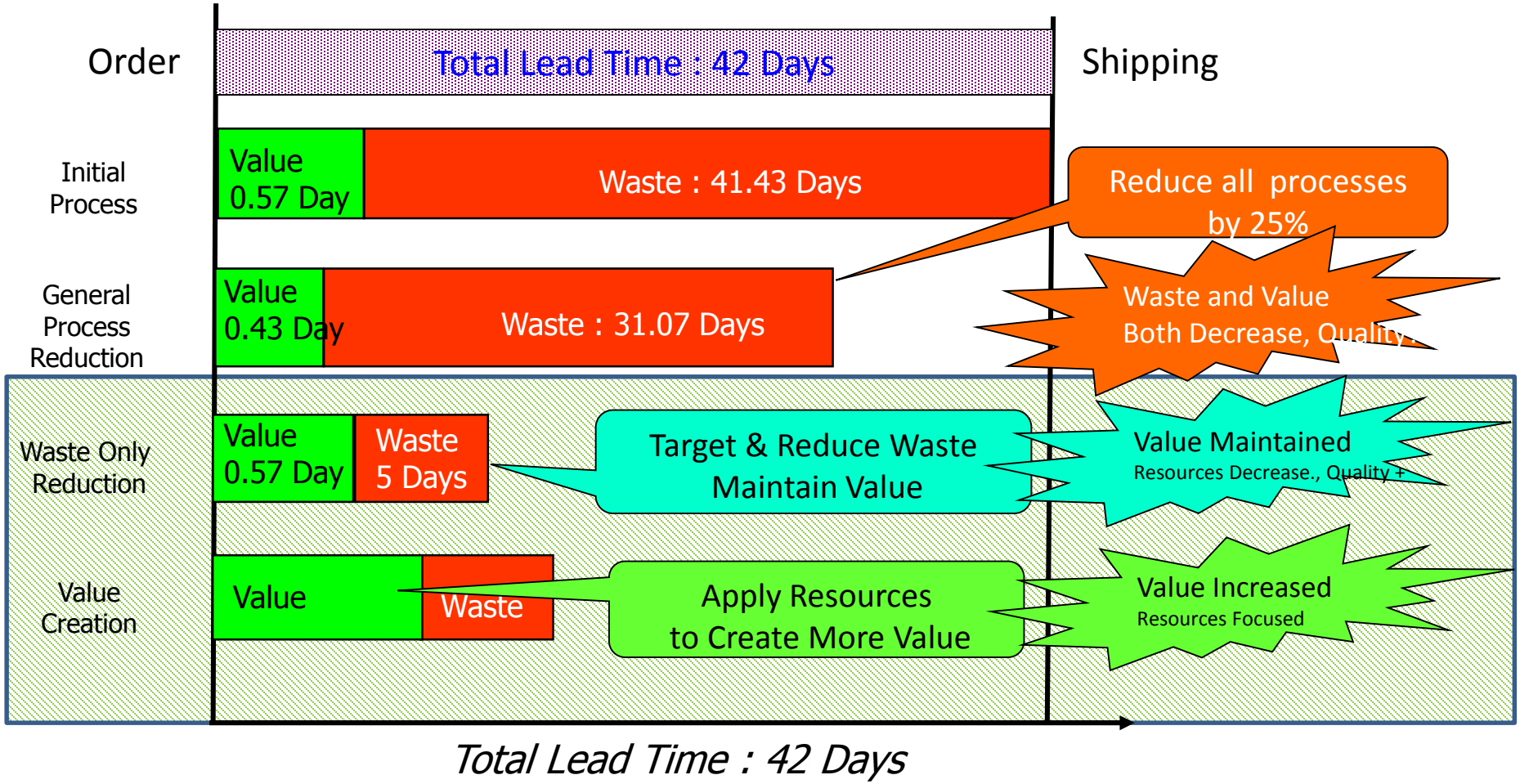
- Summary
- Data Analysis
- Opportunities
- Recommendations
- Road-Map

SUMMARY (To-Be V/S As-Is)

- Plant Capacity : 75 Machines / Month
- Mfg Lead Time : 7 Days
- OTIF : > 80%
- Customer Complaint : < 10 per year
- ITR : 8-10
- WIP : 4 Machines

- Current Production : 44 Machines / Month
- Current Lead Time : 42 Days
- OTIF : 12%
- Customer Complaint : 75 per year (2013-14)
- ITR : 4
- WIP : 33 Machines

SUMMARY



Opportunity for improvement by reducing waste and creating additional value

SUMMARY

Value Stream Analysis :

UOM : Cycle Time (Minutes), Deployment (Nos), Work Content (Man-Minutes), Distance (Meters), Qty Reqd / Machine (Nos), Total Work Content (Man-Minutes), Man=Days Reqd (Nos)

Sub Assly	*Cycle Time*	*Deployment*	*Work Content*	*Work-in-process*	*Distance (Meters)*	*Qty reqd / Machine*	*Total work content*	*Man-Days reqd.*
Base	605	18	1005	33	300	1	1005	3
Motor Casing	571	22	1003	30	317	1	1003	3
Motor casing- top plate	40	9	60	1	90	1	60	1
Underpan	857	23	921	177	857	2	1842	6
Spout	162	14	177	58	352	1	177	1
Spout ring	87	7	87	31	192	1	87	1
Cone	128	13	166	26	170	2	332	1
Dummy Ring/Screen ring/RFL ring	95	6	105	359	322	2	210	1
Mesh Ring	120	2	240	18	5	1	240	1
Toggle base	111	14	123	168	155	8	984	3
Assembly	605	10	195	34	40	1	195	1
Total	3381		4082		2800		6135	22

Required Man-days : 22

Available Man-days : 78

Possible Production : 3.5 Machines / Day

Note : Standard Machine with no customization, GS48

Summary – Current Manufacturing

PLANNING (Monthly Plan & Schedule)

CUTTING (Out sourced)

PUSH

MANUFACTURING

PUSH

ASSEMBLY & TESTING

PUSH

Proposed Manufacturing

PLANNING (Weekly Plan & Schedule)

CUTTING (Out sourced)

SUPERMARKET

Cut Pieces

PULL

MANUFACTURING

SUPERMARKET

Components

PULL

ASSEMBLY & TESTING

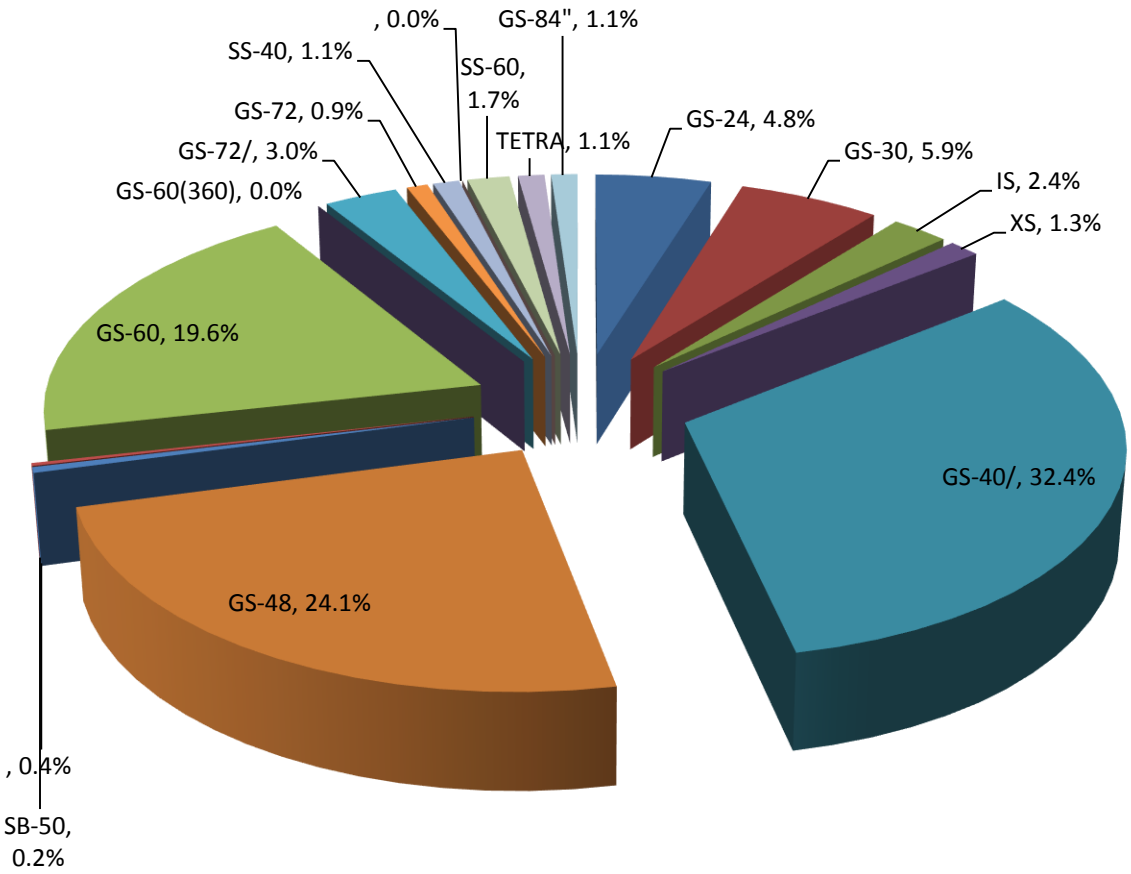
SUPERMARKET

Standard Machines

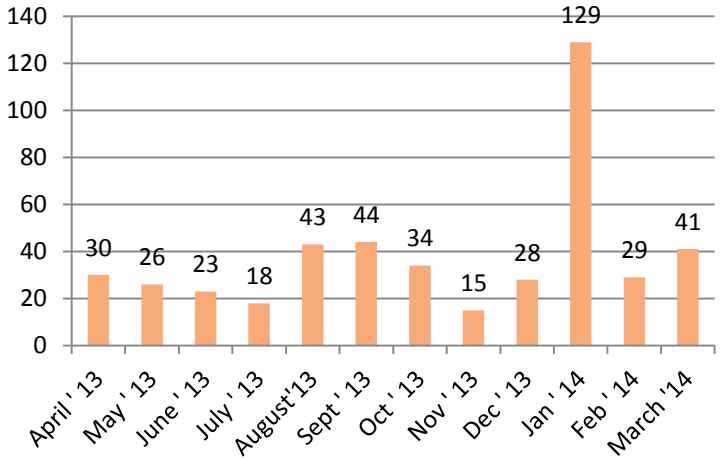
PULL

Data Analysis

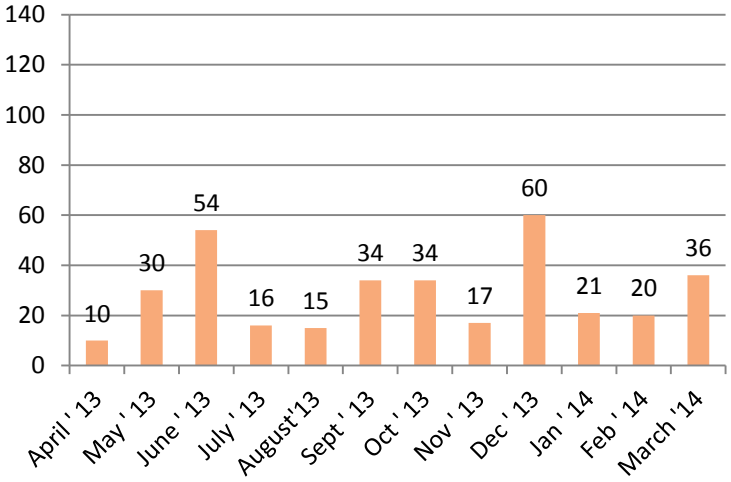
Machines Sales : Model-wise Contribution



Order Received

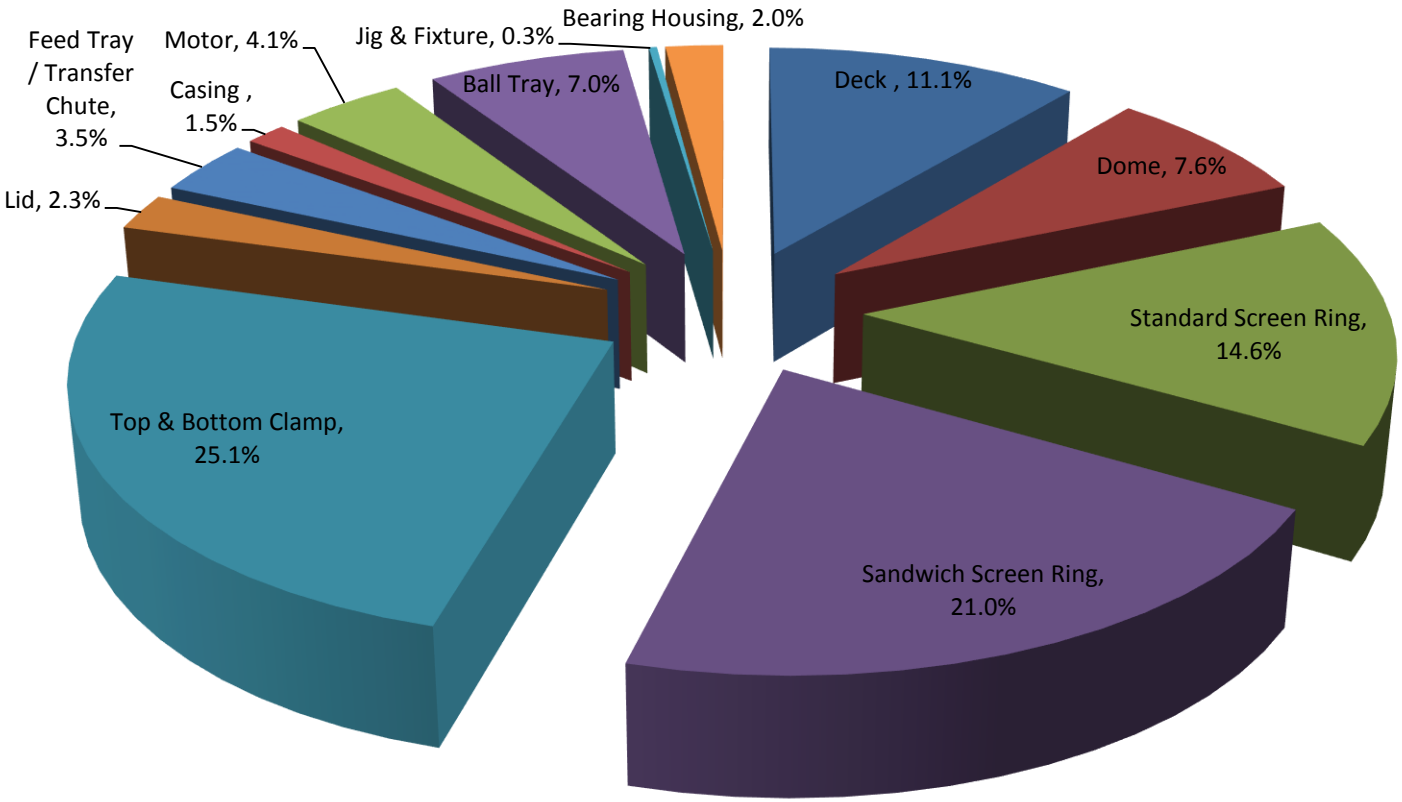


No. of Machine Produced



Data Analysis

Spares Sales : Spare-wise Contribution



Data Analysis

- Productivity
  - Man : 54% (Utilization by Sampling)
  - Machine : 86% (Availability from Down-time ana.)
  - Quality : 94.8% (Rejection : 0.2%/ Rework : 3.7%)
  - Material Yields
    - MS : 93.8% (By Value)
    - SS : 92.7% (By Value)
- Customer Complaints (FTR)
  - Machines : 75 per year (22% of M/Cs sold)
  - Spares : ***Not Available***
- On Time In Full (Delivery)
  - Domestic : 12 %
  - Export : 9 %
  - Spares : ***N/A***

Data Analysis

- Costs – Current V/S Projected

– Materials	45%	45%
– Salary & Wages	13%	7-8%
– Over-heads	12%	10%

- Notes
  - @ 75 machines per month projected V/S Current 44 M/Cs per month
  - (As a percentage of Turn-over)

Opportunities

- ✓ Exploiting available capacity & capability to produce “almost double (1.80Times)” of current production, with no extra resource
- ✓ Basic frame-work ready for launching improvement initiatives
- ✓ Possibility to cater customer within 7 days of receiving IWO
- ✓ Tapping market potential with USP – “Speed Delivery”
- ✓ Exploit opportunity cost
- ✓ Improved ITR will lower Working capital requirement
- ✓ Removed mental barriers

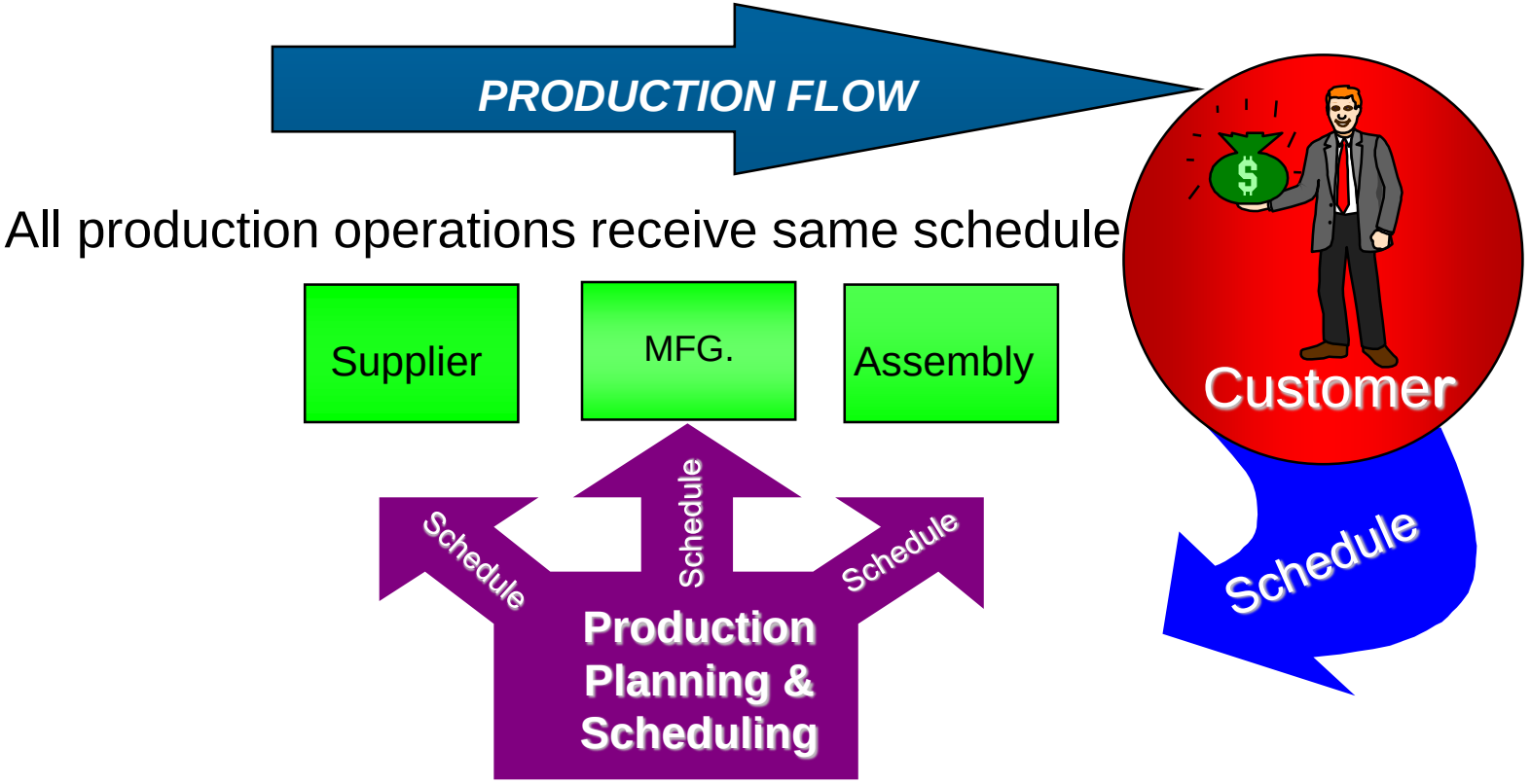
Recommendations

- Determine Work Content & Standard Output Norms
- Implement Team-Building activities like Kaizen, 5S, TPM
- Create POUS, Balanced work-stations
- Re-layout to facilitate “Single Piece, Flow Manufacturing”
- Improve Planning & Scheduling to support Single Piece Flow
- Make weekly Plans & daily Schedules & Monitor every hour
- Use Supermarket for Standard Models & Accessories
- Create Multi-skilled Task Force
- Create cross-functional staff teams for shop-floor coordination

Observations

Demand/Schedule Variance Causes

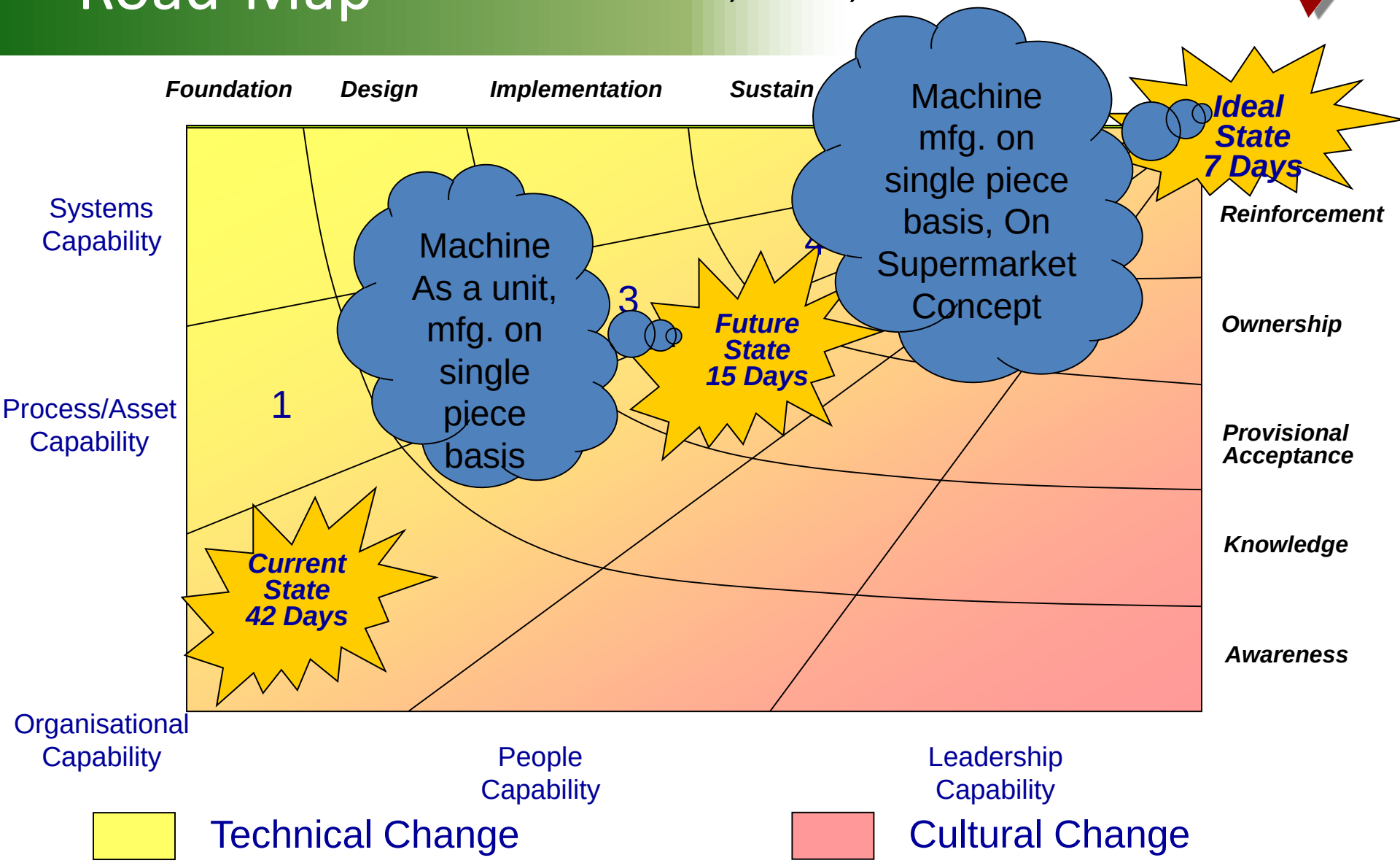
Planning/Scheduling System Mechanics: ***Push Scheduling***



Reaction to Changes Occurs Only Monthly

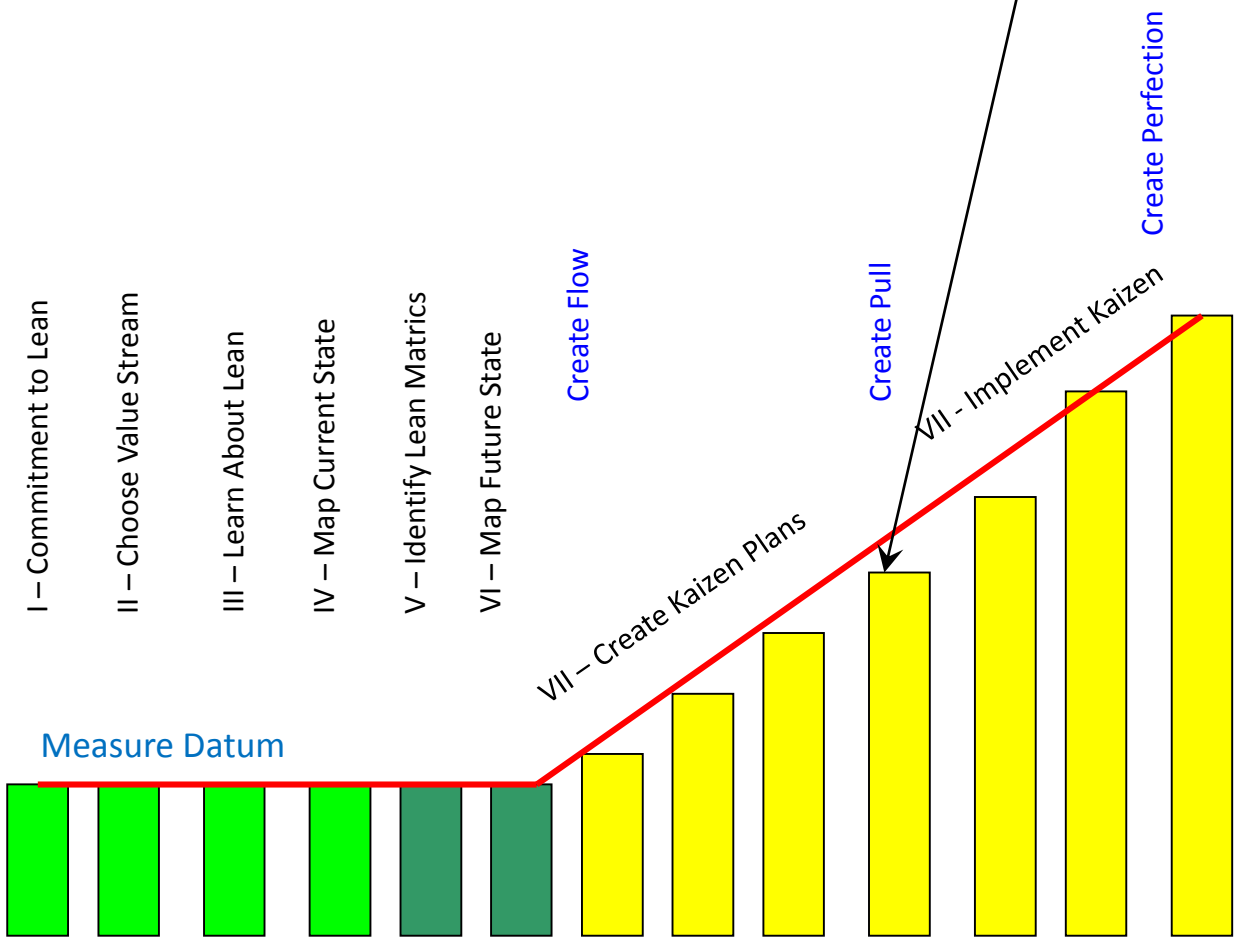
Road-Map

Models : GS40, GS48, GS60



Road-Map

To Monitor the progress, the Milestones need to be monitored



Project Team