Lean & IT: A Natural Relationship

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FINNING International (FII)
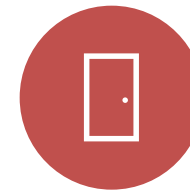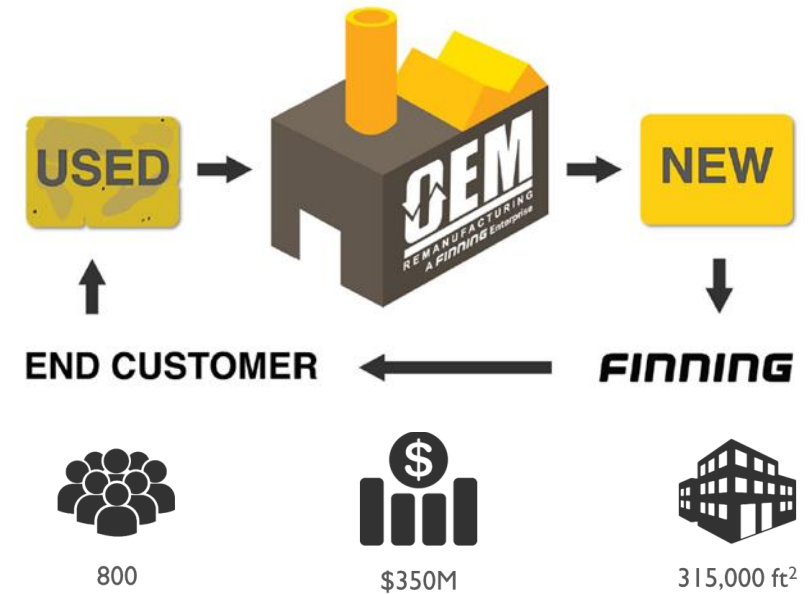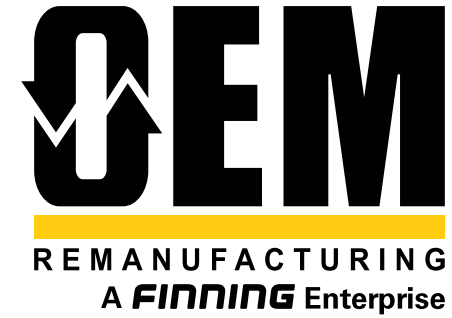
Initial Challenges – IT Setup

- Launched OEM in 2004

- *"I want a lightning fast system with all the right reports and data to tell me what I need to know"*

- *BUT…*
- *Keep it small, IT is a huge expense and a cost center*

- We needed an ERP, and past experience with reman we knew that off the shelf software does not exist for reman.

Continuous Growth & CHAOS

- Fast, rapid growth
  - 25-40% YOY for 6 years
- Growth with Change
  - Processes were continuously being defined
  - New product lines being added yearly
  - Large amount of new employees
- All support functions were new and not as efficient as they could be

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Leading ON THE Edge
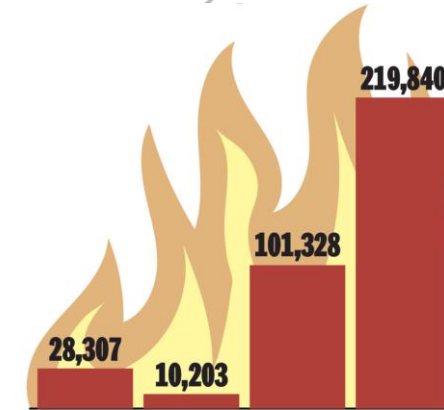
Lean Journey Begins (2011) Method

Lean fundamental training for **ALL** employees

- Leadership Driven support
  - CEO Championed

Top Down

Bottom Up
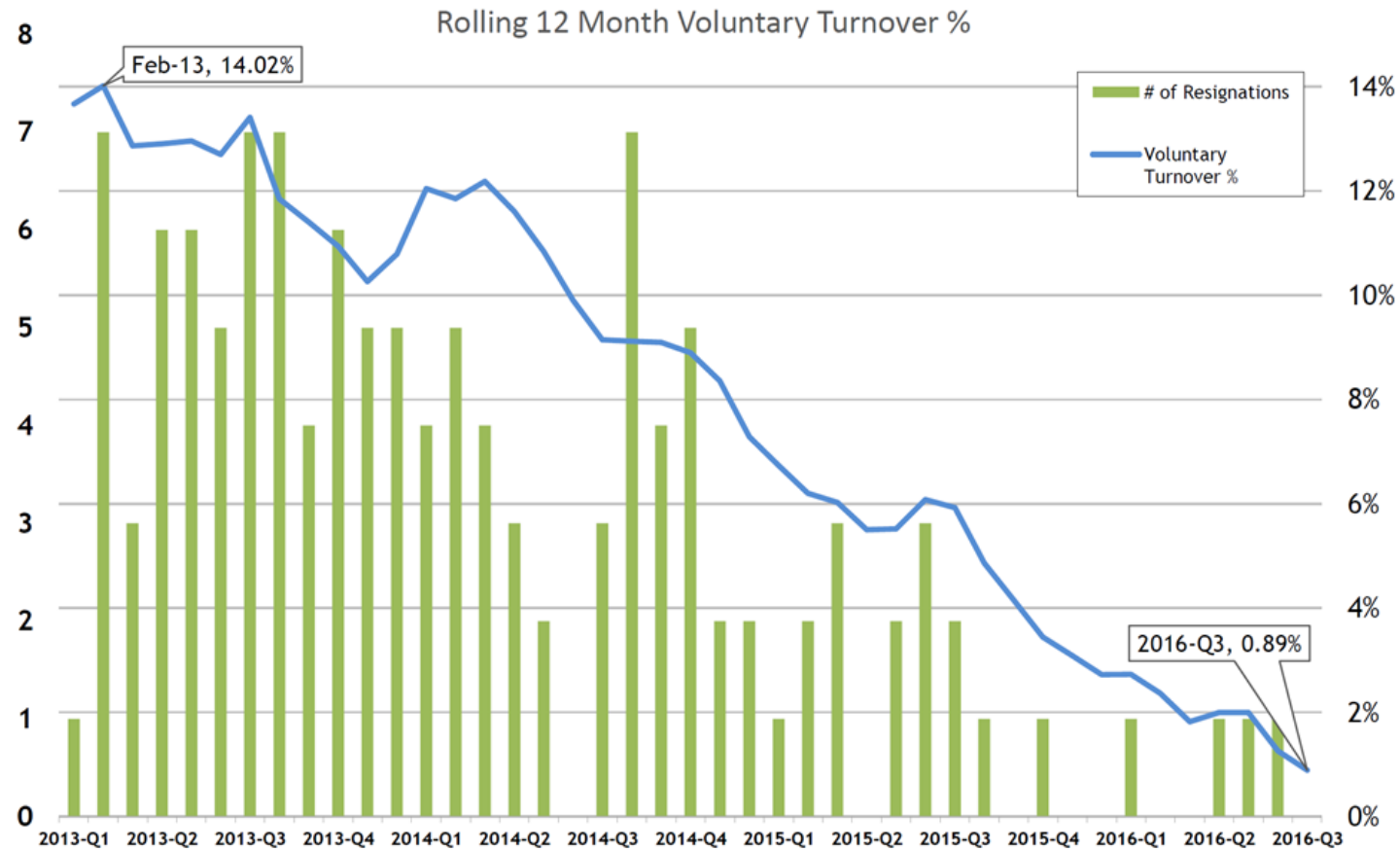
- Employee suggestions system started
  - Key to success was to guarantee follow through for every suggestion
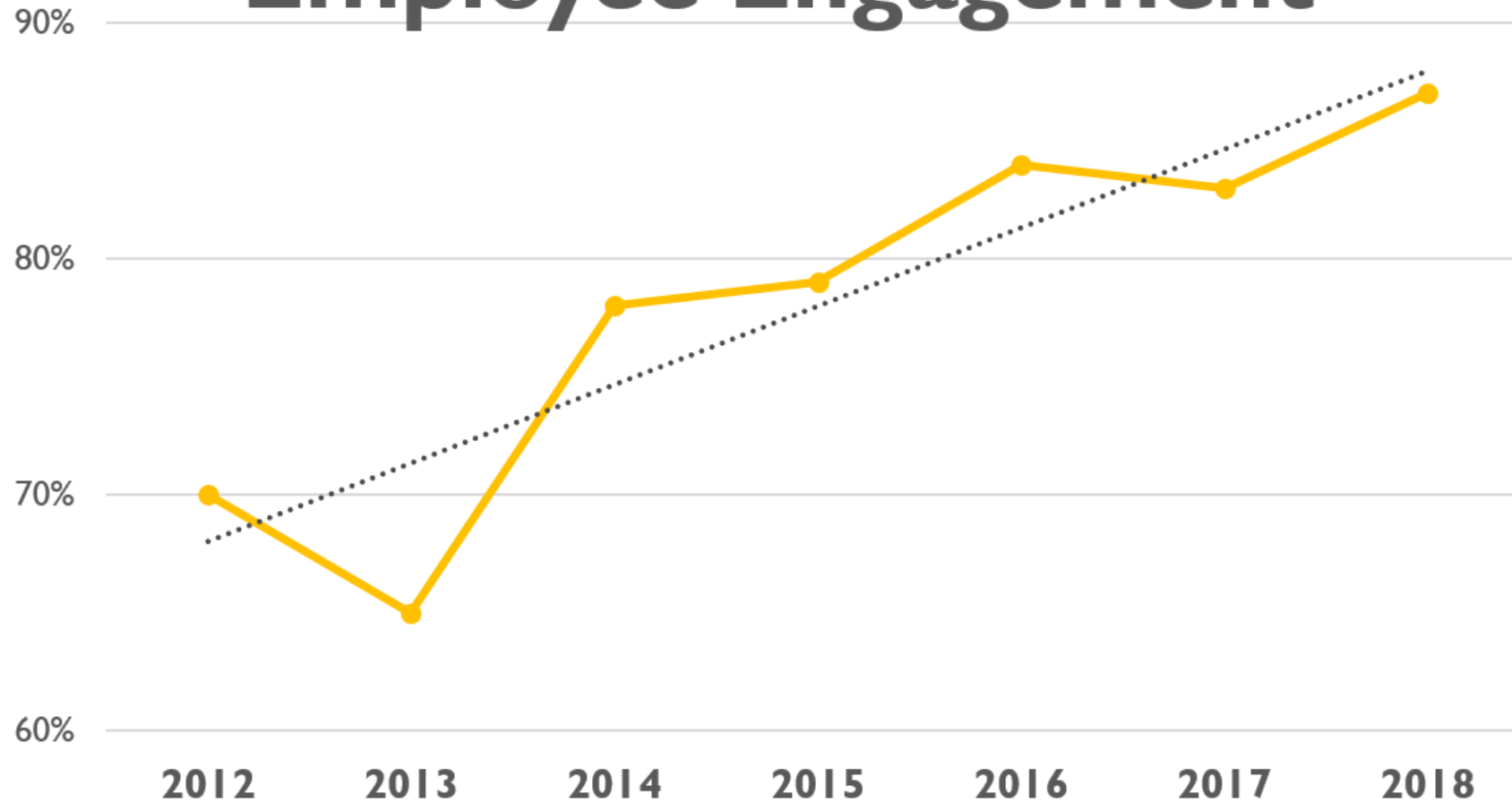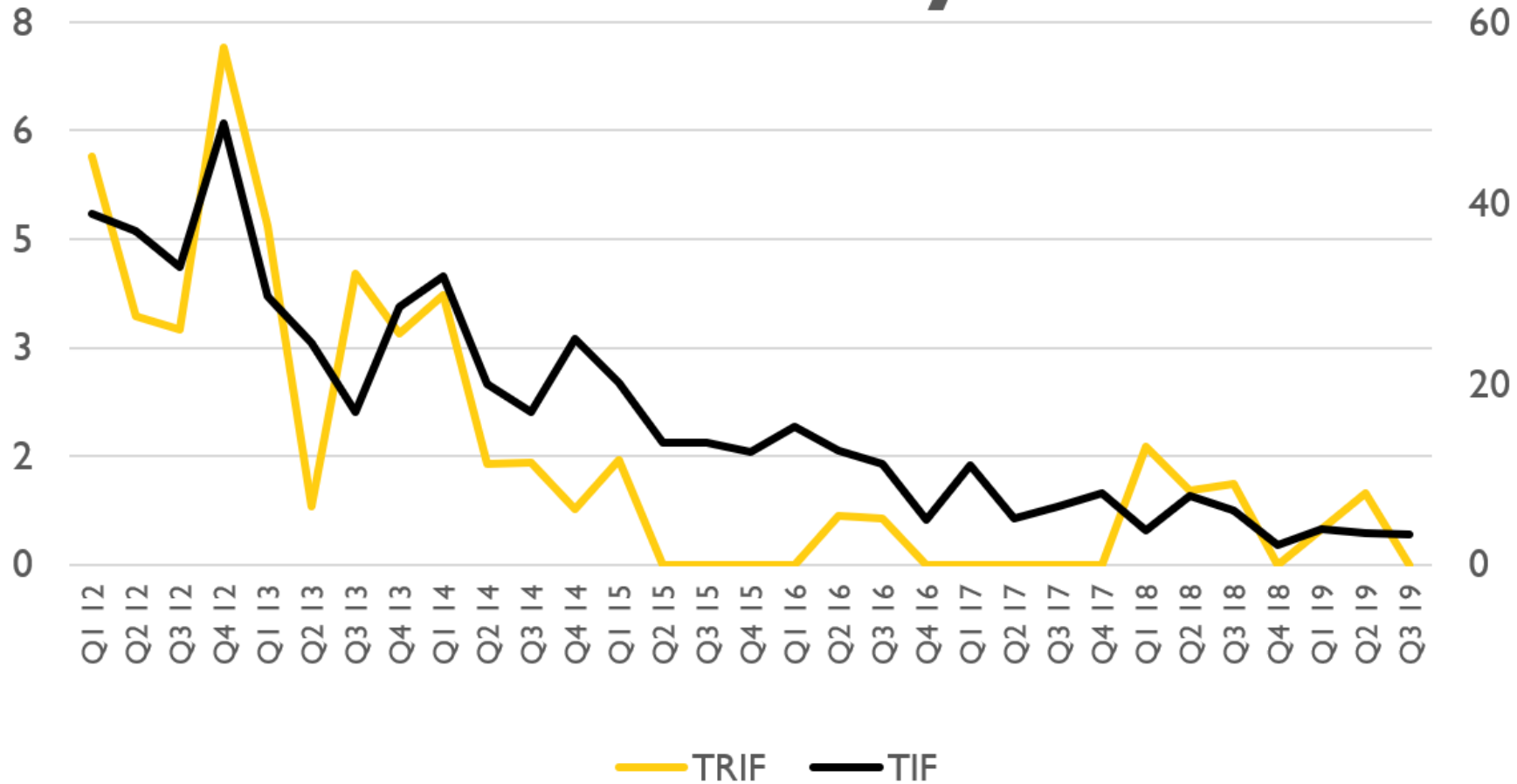 - 10,000 Suggestions Milestone
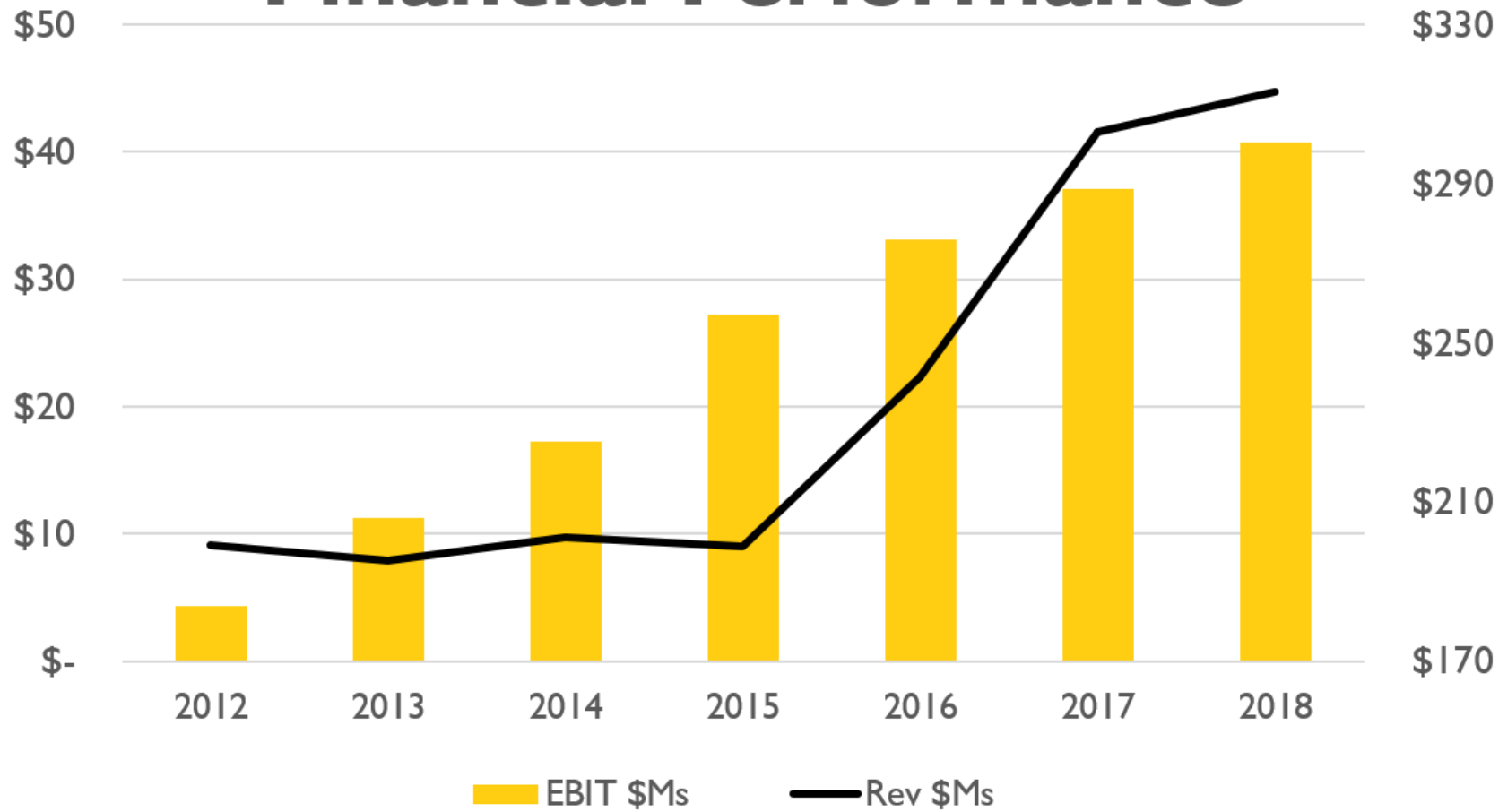
Lean and IT

- Leveraging IT
- IT staffing
- Challenge the IT team
- Partner with the business
- Established Trust
- Operations Partner
- Implement lean tools

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Hindsight – Made Good IT Choices

- Decided to employ full time software development team vs contracting*
- Designed Agile / Flexible solutions intentionally
- ERP Core data stayed true, accounting, manufacturing, procurement, inventory, etc.
- Held a firm line to the business
  - NOT to customize but to build
  - NOTHING ROGUE! databases, excel sheets, etc.
- IT team embraced a flexible open startup mentality, quick, fast and many changes
- Traditional barriers in engaging IT were removed, IT was focused on being approachable and collaborative.

Lean Journey – IT Project work

- Underestimated the increased demand for IT resources
- Generated a large amount of IT projects
  - 70 – 80% of Process improvement (PI) projects had an IT component
- Created IT project tracking system

Lean & IT – The Force awakens

- Team located onsite & interact directly
- Iterative live deployments with engaged support to resolve bugs and add functionality

- Business acumen

Understand what and who you are building this for

- What Challenges do they face
- KPI's - Are you winning or losing?*
- We became an even more Collaborative IT Team
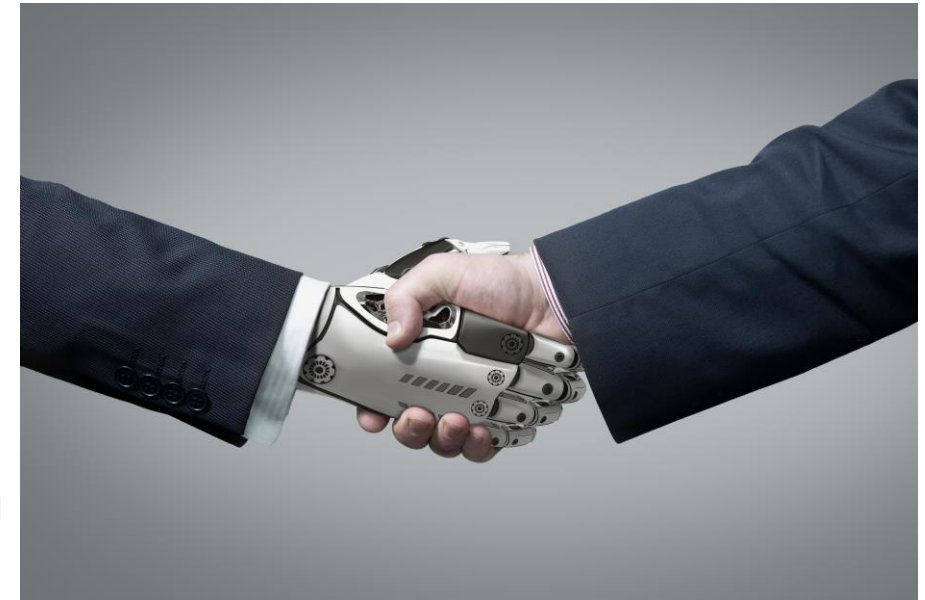
*Own the Gap by Mike Martyn and Brian Crowell

Lean & IT – Support Vs Operations Partner

- **DATA / INFORMATION IS KEY**
  - Pull data quickly & Ad Hoc
  - Quickly produced data to validate an idea's merit
  - Transparent communication & use of data

- IT had started to create a proven reputation for results due to our engagement and quality of work
- Business acumen added tremendous value
- Tipping point

Operations Partner

Support Department

Trust

Data

Collaboration

Overhead

Engagement

Necessary
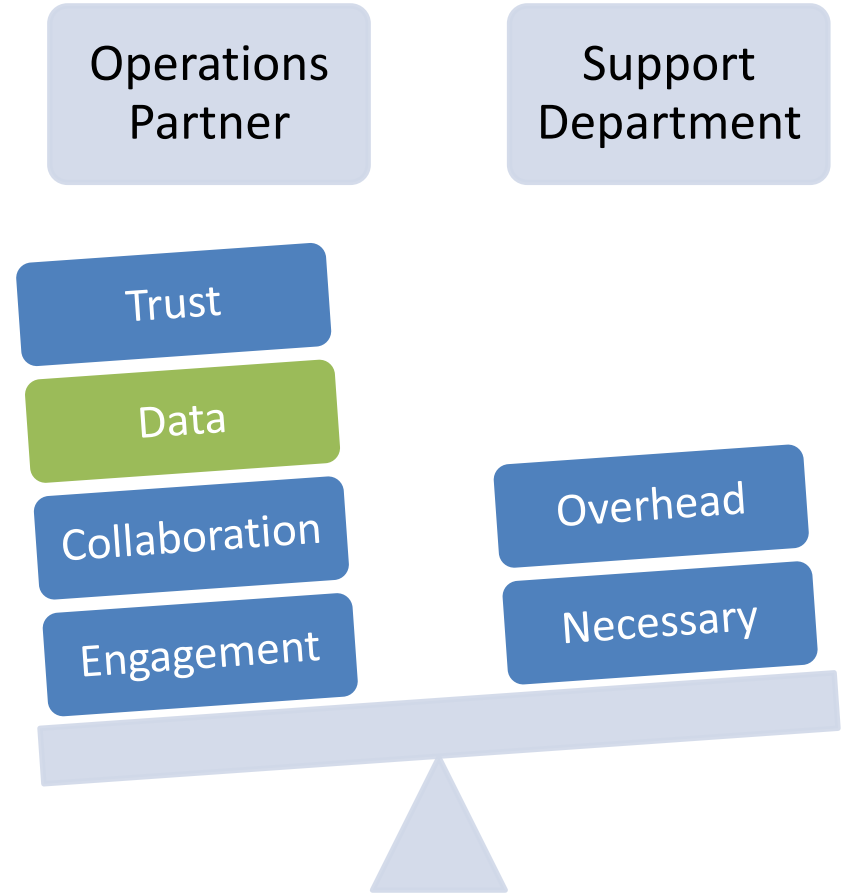
IT – Support Vs Operations
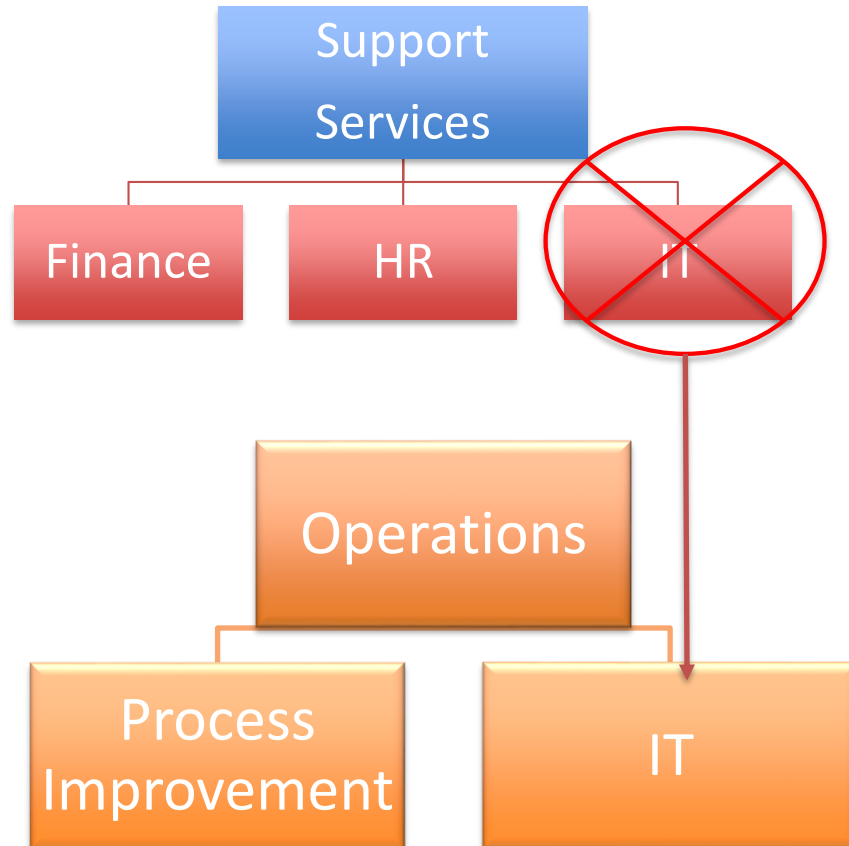
- Org Change
  - Moved Process improvement & IT under the same org
- Operational Planning Activities
  - IT Senior leadership became an important role in strategy planning and execution
  - IT was pulled into all areas of operational planning activities, from shop floor to front office

IT Operations – Continuous Improvement

- Common Perception *"IT takes forever to do anything"*
  - Communication, Communication, Communication
- Bureaucratic Red Tape – Process vs Product
- No tracking mechanism for smaller user requests

IT Operations – Continuous Improvement

- Created **Dev Support** Process
  - 1 Day Every Week
  - Small Scale requests
  - Evolved our own process
  - Generated Value Added KPI's
  - Velocity First
  - Priority Capability
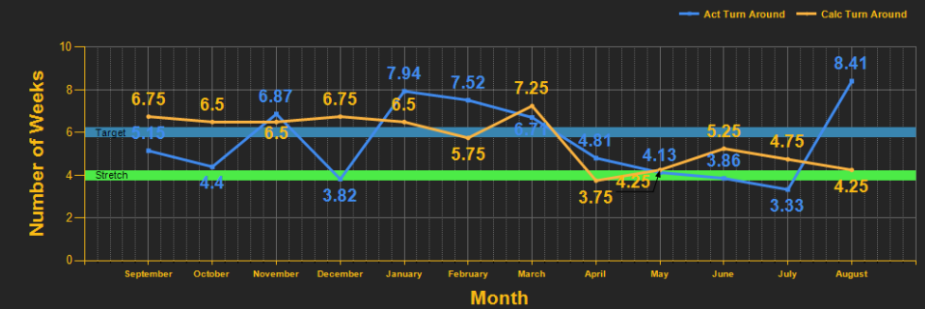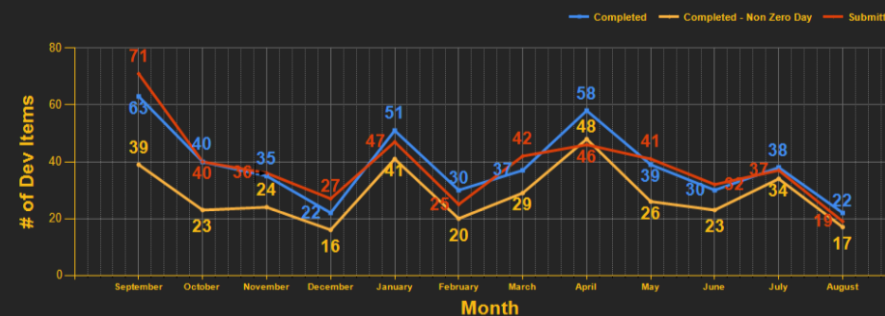
Lean Principles & IT – Kaizan

- IT became a participant in Rapid Improvement Workshops
- IT in the field
  - Meant for quick wins and discovery of ideas
  - Quarterly Job Shadow in chosen area
  - 3 Day event
    - Day One:
      - Developer job shadows business user
      - Provides hands on education and suggestions for improvement
    - Day Two & Three:
      - Developer implements quick wins
      - Remainder of ideas are submitted for further development

Lean Principles & IT - Engagement

- IT leadership fostered increased engagement by empowering the team in designing solutions
  - Better Product quality
  - Leveraged business acumen
- Bi-Weekly Team Meetings
  - General project update
- Daily Project Gemba Walks
  - While implementing med / large scale solution
  - Quick turnaround of feedback
  - Similar to Agile development
- **Developers Benefit Greatly from Gemba Walks**

Failures for IT

Corporate driven Lean KPI's (5S, suggestion system participation, Lean Dept. KPI's)

- 5s of IT Desks
    - "What's the Value for Me?? I know where my mouse and keyboard is…"
    - Develop & Sustain 3s checklists
- Staff engagement in Suggestion system
    - "By the time we record an idea we could have just done it"
- Developing KPI's for IT…
    - "What do we track, how many phone calls or emails I get a day?"

But! The benefits began…

- 5s of Storage areas
    - Value realized very quickly how beneficial this was when looking for equipment (cables & adapters especially)
- Started step towards digital 5s

Failures – Data & Analytics

PROBLEM: Heavy demand on reporting

Resources were torn between developing solutions verses reports

- Started Reporting Analytics team
  - IT controlled and limited data access
  - The business couldn't define their reporting needs were
    - "IT just build it for us, you should know what we want and by when"
  - Hard to implement with new staff…

Challenge: How to get reporting work off of IT developments plate?

- Give business access to the data – How do we do this?

Failures – Data & Analytics

Concerns: MANY…
- Burden on Production Systems
- Data integrity
- Data complexity

Solution: Gave Business SME's access to data
- Formed a group of business SME's with leadership from IT
- Created real time replication of production data for them to access
- Implemented a reporting visualization tool
- Built easy to consume data marts / warehouses
  - Database was complex, we needed an easy way for non-technical people to pull data
- Weekly meetings to check in and establish standards
- IT was committed to support this team as a priority as required

Successes

- Service to Operations org change
- Operations contributions beyond IT projects
- Developed great data analytics tools for the end users
- Dev Support Process
  - Enhanced sustainment
  - Supports continuous improvement
  - Completed 2000+ user requests since 2016
- Defined & Using value added KPI's
- IT in the field / Kaizen
- Digital Red Tag
- Digital 5s

Success – Winning Together

CATERPILLAR working with 7 dealers across 14 mine sites to analyze application of specific Reman processes (Service Literature)

OEM was the Only Dealer in CATERPILLAR network that had specific data available to support this

Challenge Coin Military Root (Summarized)
Traditionally, commanders hand out the coins to troops for exemplary service and morale boosting. Coin is for Recognition of Job Well Done
Within the ranks, if someone challenges you, you're supposed to produce your unit coin on the spot.

If you don't have it, you're indebted to the person who challenged you, which usually means you buy them a beer. If you do have your coin, they're buying

Open Challenges

- System Documentation
  - Things change to quickly, as soon as its on paper it's obsolete or incorrect
- Agile development vs waterfall (be flexible and rigid as required)
  - Consistently review our approach and try and remain open to what would best suit the project at hand
- Continuous improvement of process, but standards aren't always concrete

Leading on the Edge

- Leading on the edge – Servant Leadership
  - Remove barriers
  - Support through challenges
- Empowering development leaders and developers
- Engaging staff in owning their process AND technology
- Gemba
  - Break the stigma of engaging with people
  - Understand the problems users face allows for better technological innovation
- Leadership drove the business to engage IT more in new process planning (Leaning In)

Lean & IT – Review & Take Away(s)

How did we get here? What can you do?

- Established Trust
  - Its OK to fail, just learn and recover – Fail Fast
  - Facilitate a Safe Testing ground for new ideas for EVERYONE
  - Engage the whole IT Team in building & defining solutions
- Review how you currently leverage IT, Are they engaged in all your processes?
- Communicate! – No seriously just do it!... until they say stop
- Look for the Lean and Entrepreneur Spirit for IT staffing
- Challenge the team, what would they do if they were Showing off?
- Implement "IT in the Field"
- Data is Power in Lean – Make it accessible and easy
- Partner with the business owners – Prove that IT is an enabler
- Meet Your Commitments, if not, communicate!

"You don't have to come to IT with the solution, just the problem, we'll find the solution together"

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Acknowledgments

The success of Lean at OEM is attributed to EVERYONE contributing, our fearless leaders being open to experiment and allowing the time for it… and we are happy and humble that I.T. became an important tool used in the success of this Journey.

Thank You!

Your opinion is important to us!

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

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