



MESA Metrics Research: History, Preview and Help!

Tony Christian
Director





2011/2012 Research Study Please Participate!

Pursuit of Performance Excellence: Business Success through Effective Plant Operations Metrics

- Take the survey now at www.bit.ly./oYWifJ
 - **Please see MESA e-mail invitation 27. Oct**
 - Manufacturer/producers in all segments
 - Confidential: results shared in aggregate only
- Final reports due out in February



2011/2012 Study Sponsors

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A lightbulb with a blue glow, containing a small airplane and gears, set against a green background.

Agenda

- Brief Introduction to Cambashi
- Background to the Metrics Study
- Issues?
- The 2011/2012 Study
- Some Early Results
- Summary



About Cambashi

- 25 years of passion for bringing together buyers and sellers of IT
- Industry analysts, market researchers and consultants
- Focused on mission-critical aspects of discrete, batch, process, construction, energy, distribution, and utilities
- Headquarters in Cambridge, UK; US office in MA
- MESA's research partner for Metrics studies



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Origins

- Original impetus from MESA membership, specifically manufacturing companies; issues were:
 - Plant operations managers who champion these efforts often need to make the case with executive budget holders
 - Current financial systems and metrics are not designed to link plant improvements to business outcomes
 - Many companies have not realized the benefits anticipated from information technology (IT) investments; the benefits or gains from a particular system may have been attributed to other initiatives
- In 2009 MESA survey designed to follow the Metrics that Matter survey run in 2006 to better understand how manufacturers are using or would like to use metrics
- The MESA membership is still seeking more decision making insight from the large quantities of data that already exist

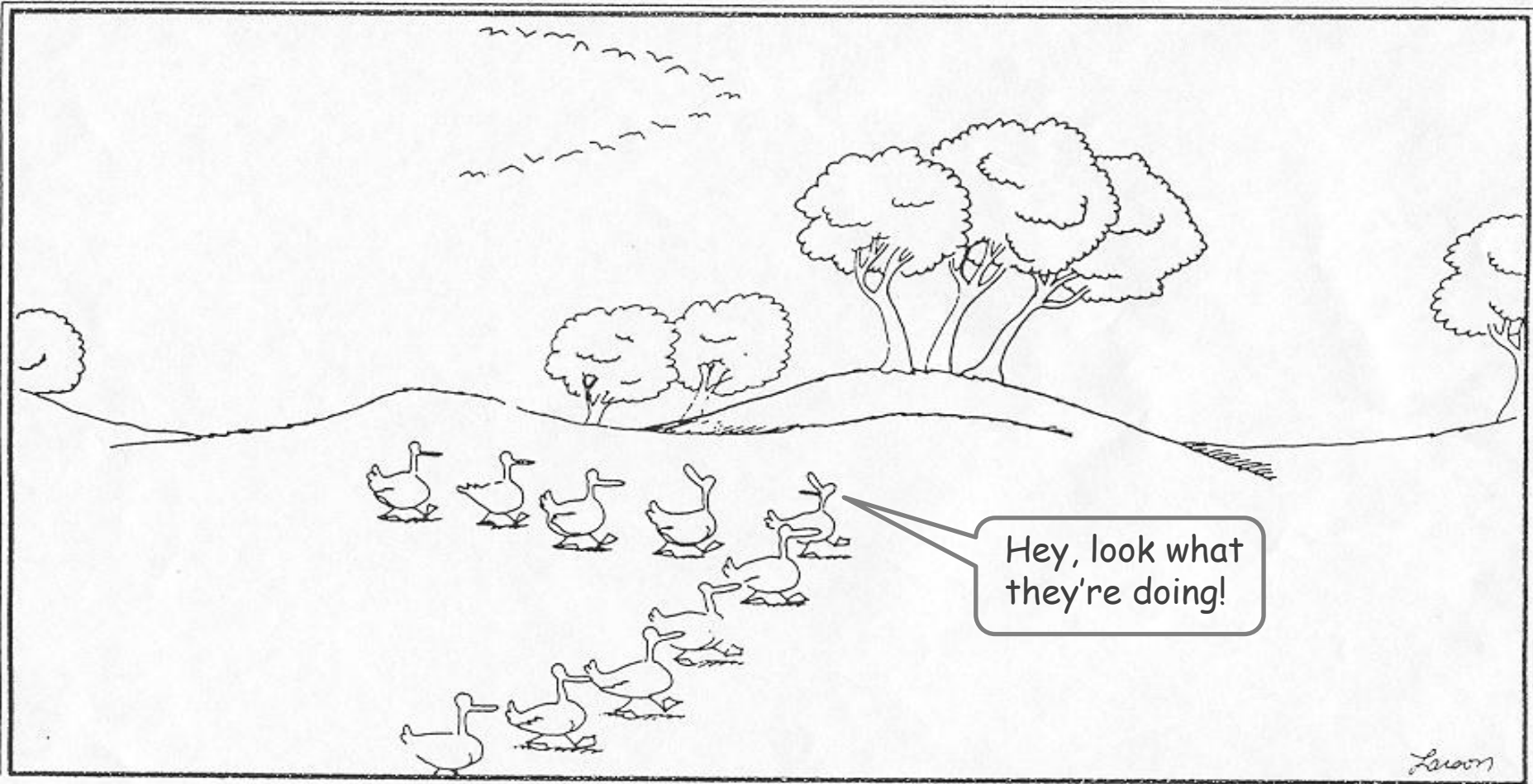


WHY DO METRICS MATTER?

- Metrics are used to measure and monitor how a manufacturing business is performing
 - “You can't control what you can't measure” (Tom DeMarco)
- Metrics can be exploited to highlight opportunities for improvement
- Which metrics are important?



Benchmarking





MESA Metrics study topics

- Improvement to key performance indicators (KPIs)
 - Operations
 - Business/financial



- Metrics processes
- Best practices
- Correlating plant performance and business performance
- Software use
- Current situation
- What “Business Movers” do differently

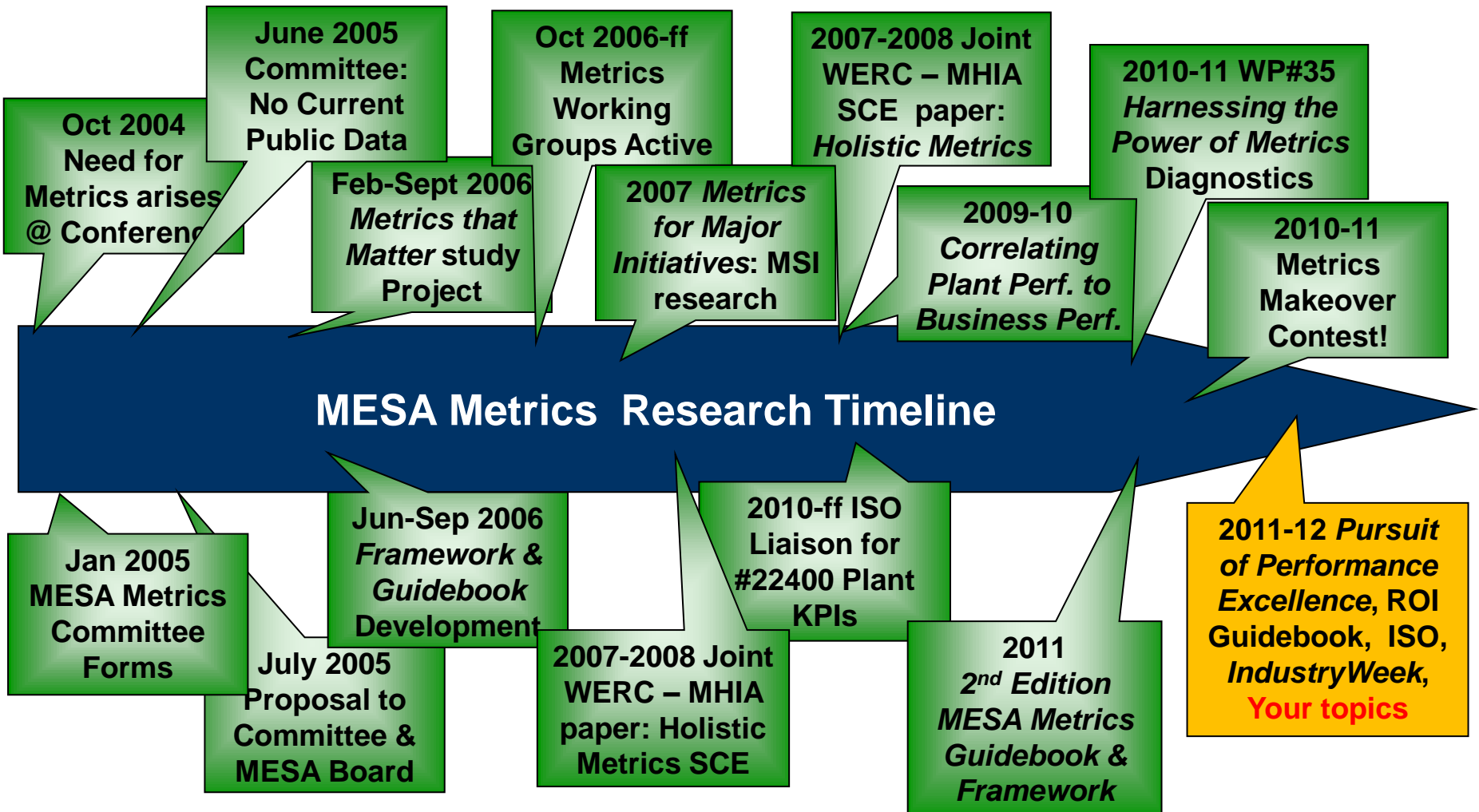


Progression

Metrics to Move from Plant to Business Success will focus best practices in measuring and achieving plant and business improvements.

*As the fourth study from the MESA Metrics Working Group, it will build on *Correlating Plant Performance to Business Performance*, published in 2010, *Metrics for Major Initiatives* published in 2007, and *Metrics that Matter*, published in 2006.*

MESA Metrics research background





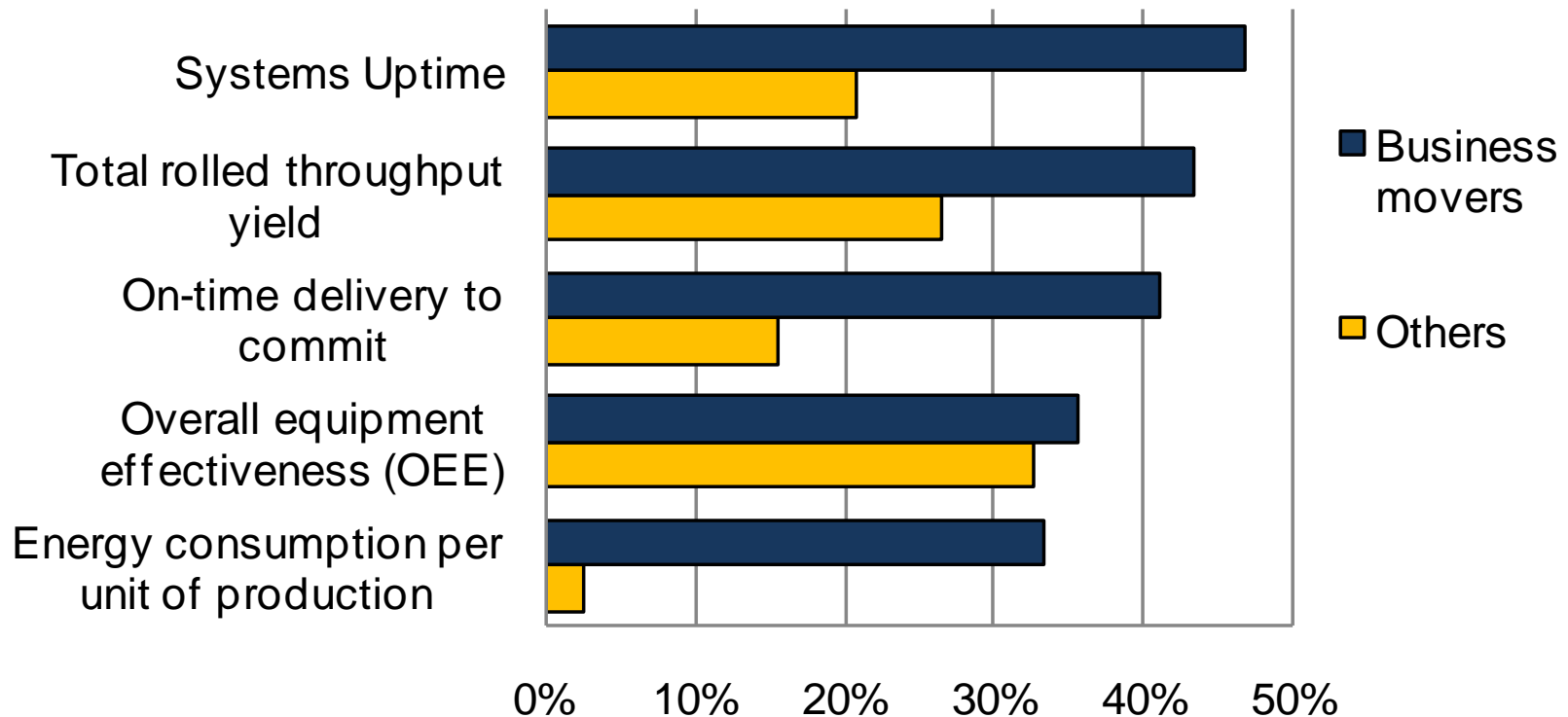
The “Business Movers”

- In 2010 study, the “Business Movers” group was ~1/3 of respondents who saw
 - EBITDA improved over 10% or
 - Net Operating Profit improved over 10% or
 - More than 1% improvement on more than half of listed business metrics
- The “Others” group was all other respondents (~2/3) with less dramatic business improvement



What we've learned about Business Movers

Respondents reporting 10% or more annual improvement in operations metrics

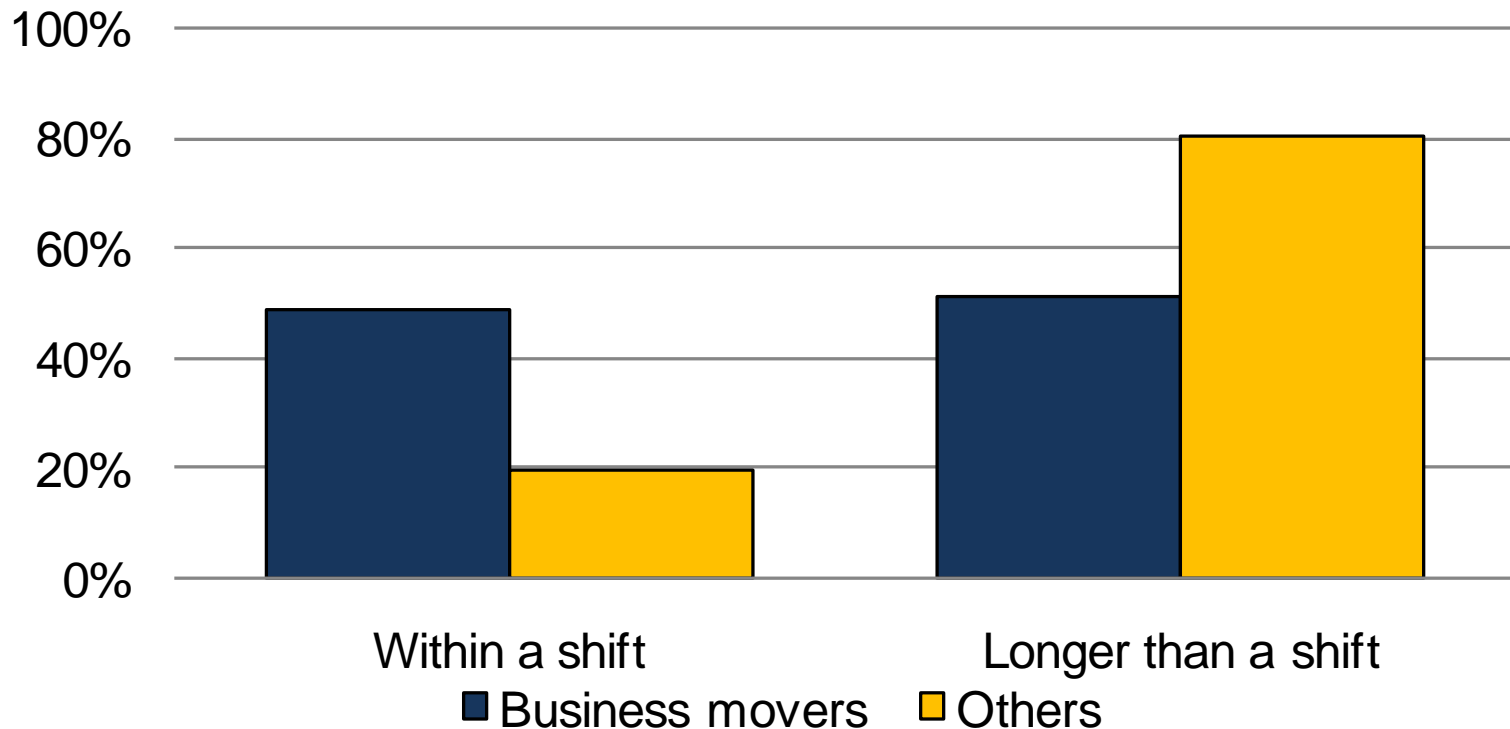


Source: *Correlating Plant Performance to Business Performance*, © 2010 MESA International & Cambashi Inc.



Business Movers show results faster

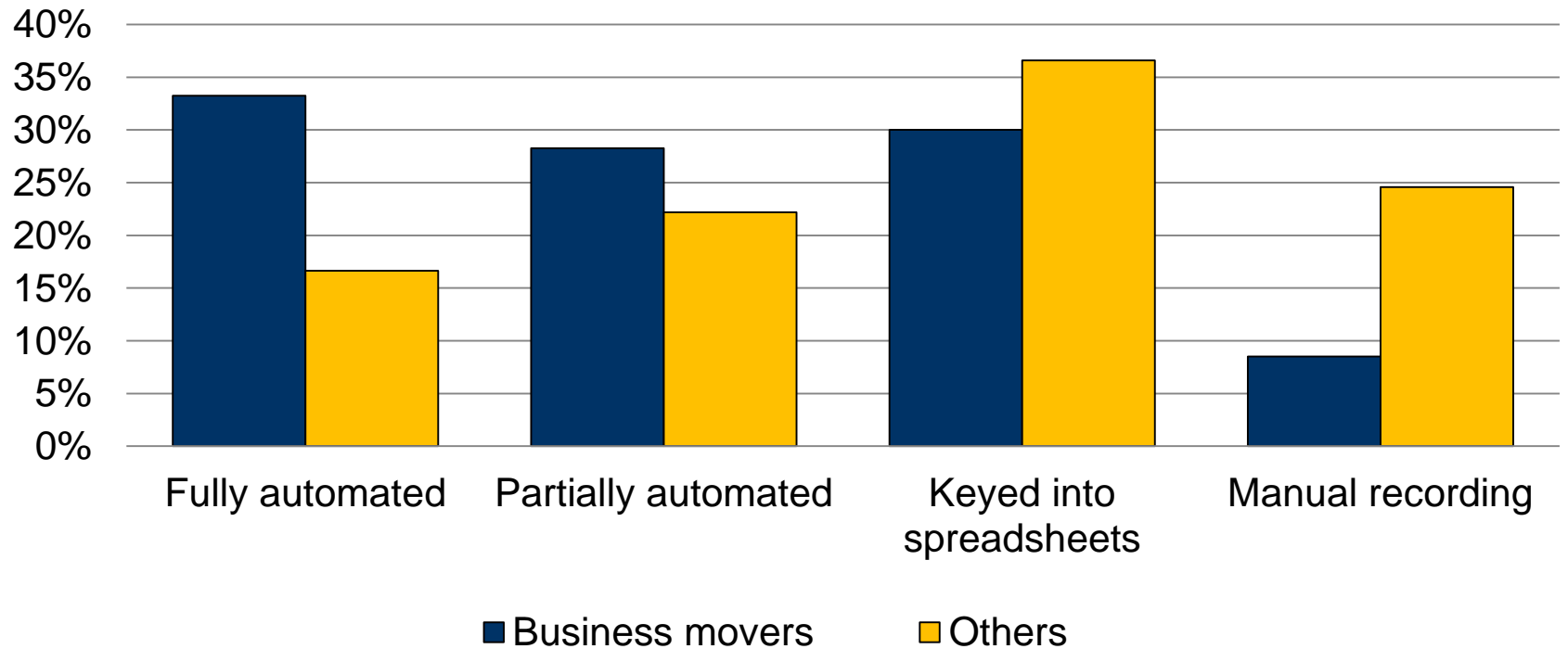
How rapidly operational KPIs showed to those managing the operations measured



Source: *Correlating Plant Performance to Business Performance*, © 2010 MESA International & Cambashi Inc.

More Business Movers have automated data collection

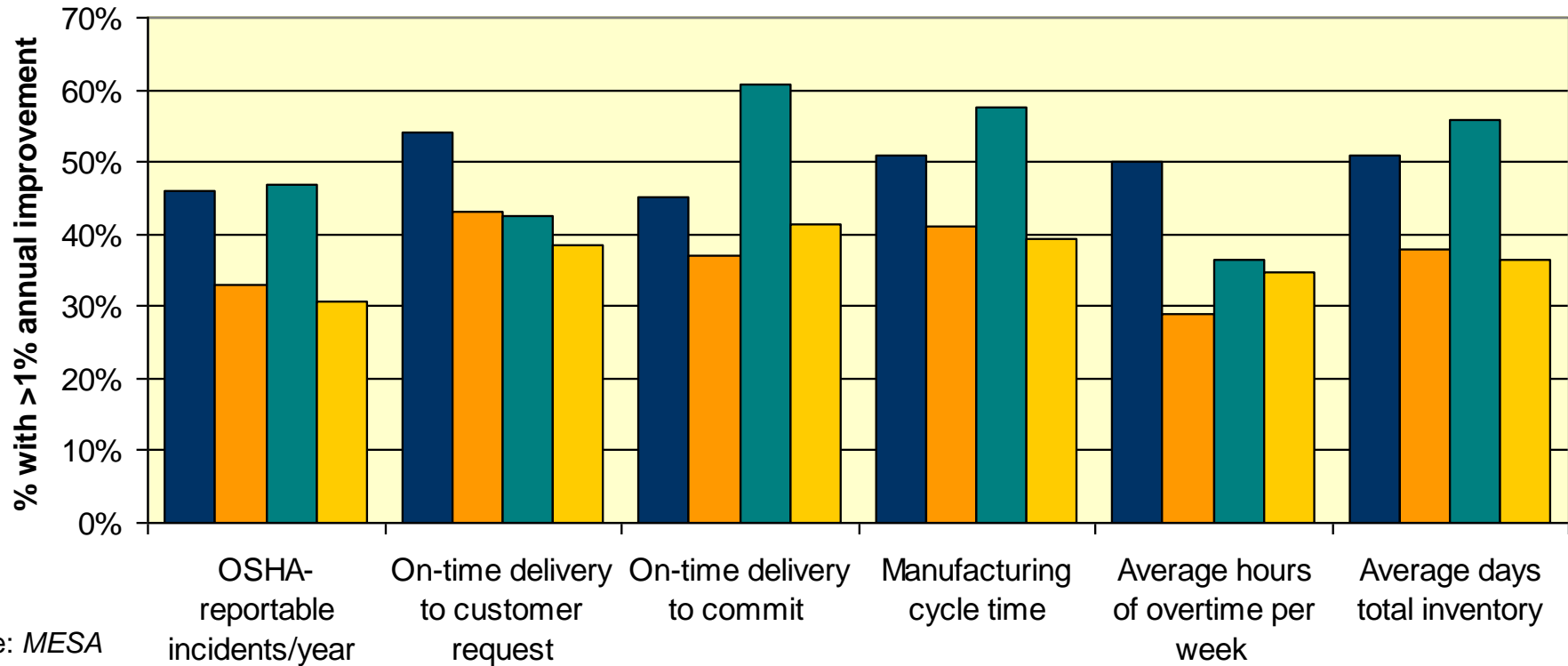
Data collection mechanism for metrics



Source: *Correlating Plant Performance to Business Performance*, © 2010 MESA International & Cambashi Inc.



MES & dashboard users more likely to improve



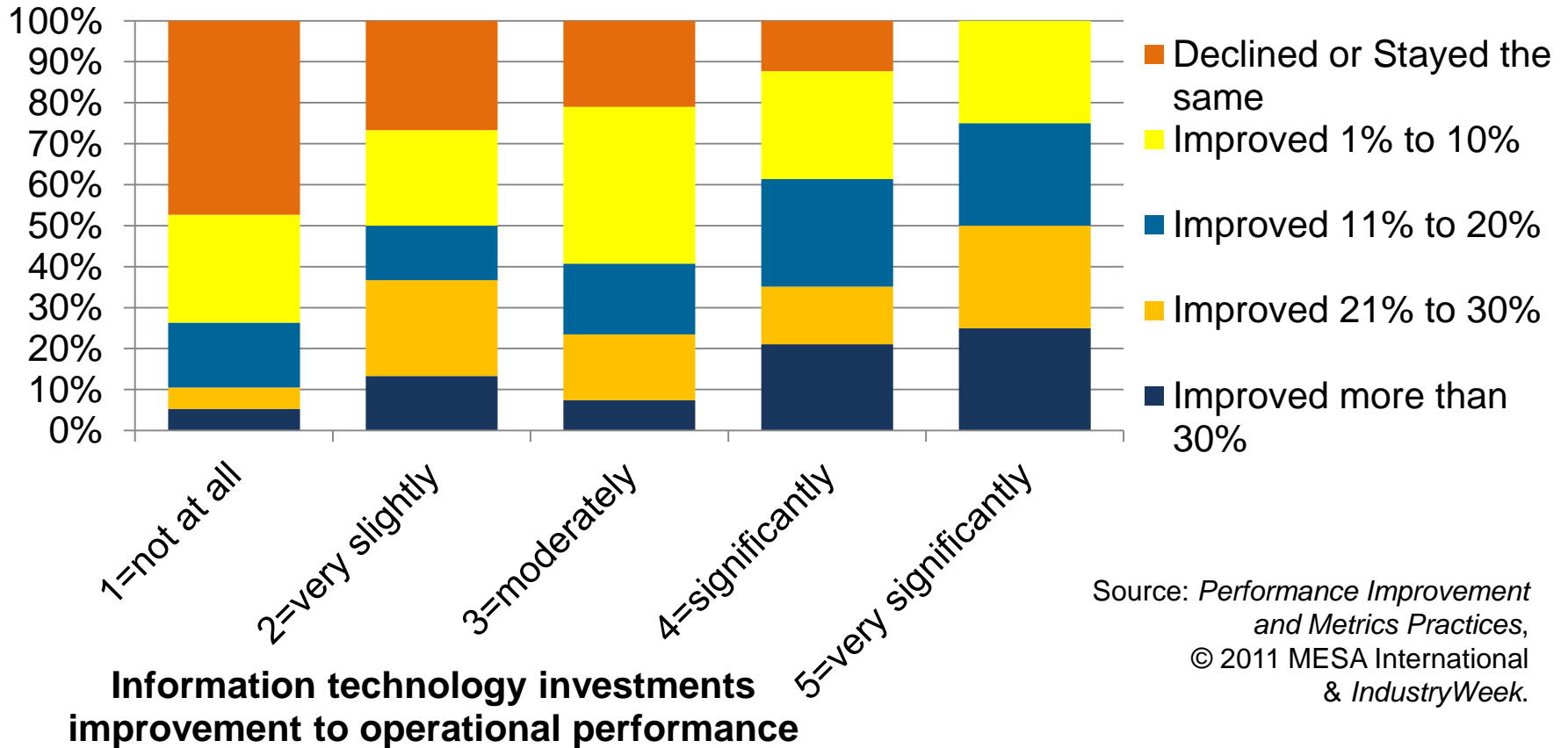
Source: MESA
Metrics that Matter:
Uncovering KPIs that
Justify Operational Improvements

■ Use MES ■ No MES ■ Use Plant Dashboard ■ No Plant Dashboard

© 2006 MESA International & Industry Directions Inc.

Technology benefits correlate to quality improvements

Those with greatest improvements from technology all improved quality





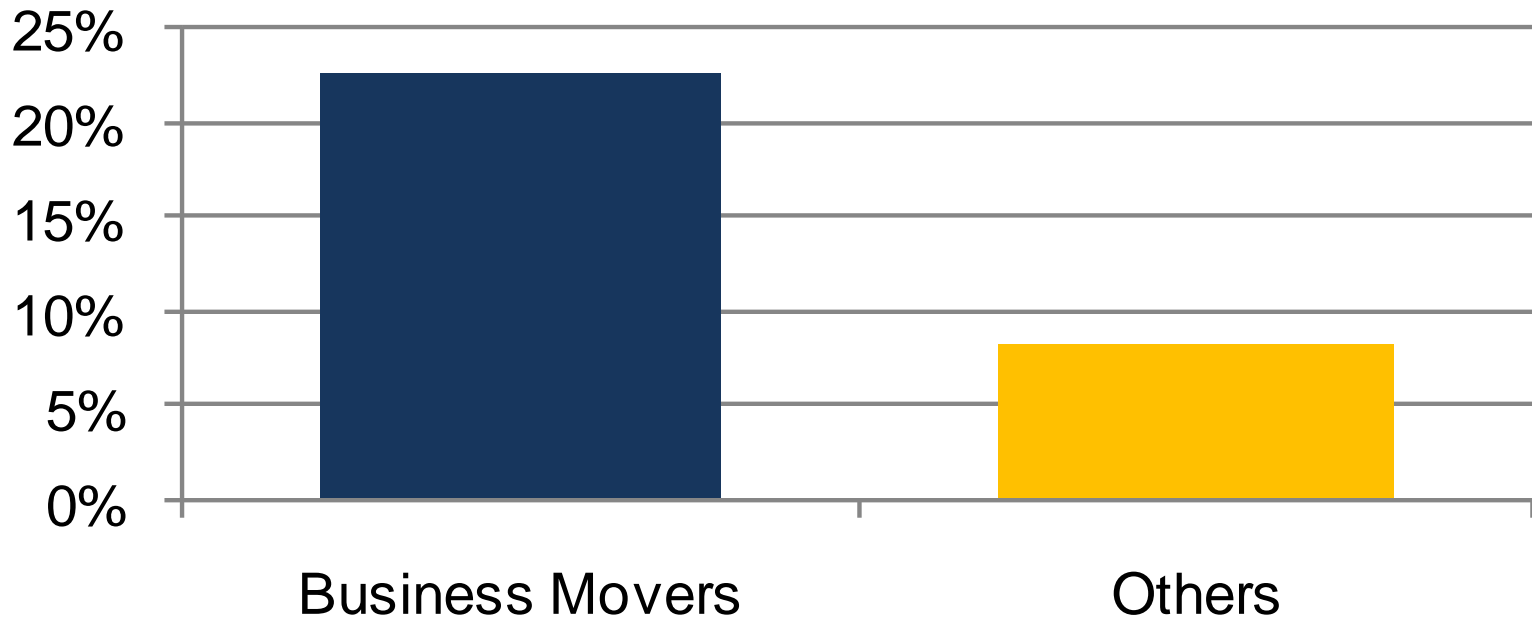
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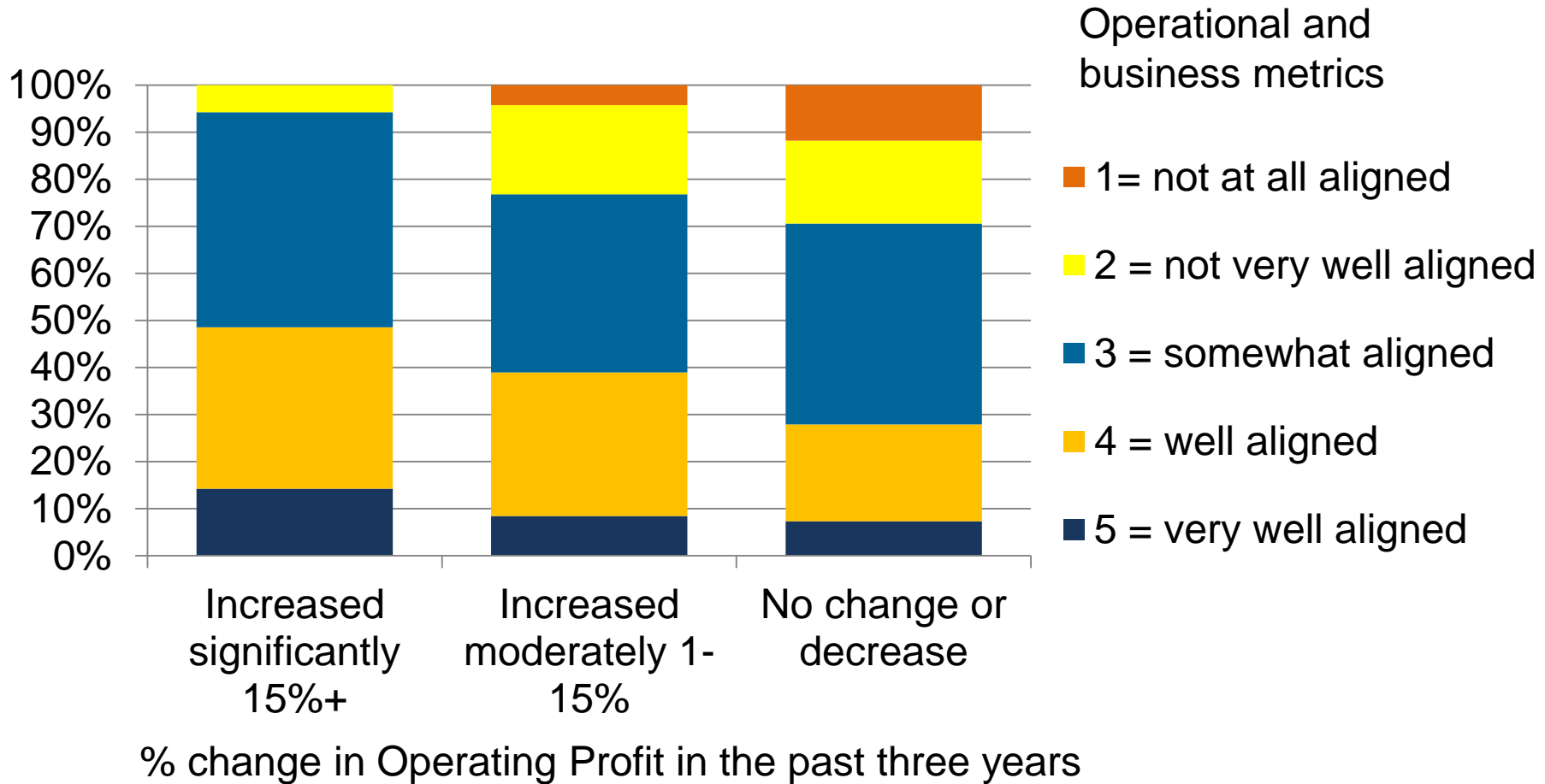
Even the best struggle to link metrics across levels

Links between operations and business KPIs are very effective



Source: *Correlating Plant Performance to Business Performance*, © 2010 MESA International & Cambashi Inc.

Correlation - 2011 study with *IndustryWeek*



Source: *Performance Improvement and Metrics Practices*, © 2011 MESA International & *IndustryWeek*.

A lightbulb with a blue glow, containing a small industrial plant or factory scene, symbolizing ideas and innovation.

Questions raised by 2006-2010 studies

- What is slowing down metrics availability?
- What is required for metrics data to be valid?
- How can you get the right metrics to the right people at the right time for them to act?
- Are there leading and active metrics that help improve results on lagging metrics?
- What metrics help plants support innovation?
- What skills do employees, supervisors and managers need to improve effectively?
- How to better link business and plant metrics?
- What must change for plants to support new strategies?



Perceived Value



You're right Wilson,
the numbers don't
lie

Find me
some that do



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2011/2012 Study Industry Council

- 13 active members
 - Manufacturer / producers only
 - Wide range of titles, disciplines, and scope of responsibility
 - Hot button issues to shape survey
- Experienced & passionate about metrics***
- Alcoholic beverages
 - Construction materials
 - Electronics
 - Engineered industrial catalytic converters
 - Food
 - Home and garden consumer durables
 - Power generation
 - Resins & adv. plastics
 - Semiconductors



Builds on previous MESA Metrics research studies

- 2006 *Metrics that Matter*
- 2007 *Metrics for Major Initiatives*
- 2010 *Correlating Plant Performance with Business Performance*

Methodology:

- On-line survey (quant) and telephone surveys with Industry Leaders (qual)
- Supported & guided by Sponsors and by Industry Council of manufacturers/producers

A lightbulb with a glowing blue and white interior, containing circuitry and a small airplane, set against a green and blue background.

Objectives

- Correlation between operational and business performance improvement; what metrics information flows/infrastructures contribute?
- Trends on degrees of improvement and metrics used
- Link use of Manufacturing Enterprise Solutions (MOM/MES, OI/EMI/OPM, PLM, QMS, EAM, APS, LIMS, ERP, SCM) to business success
- Explain some of the best practices industry leaders are using to improve performance more rapidly
- Examine the impact of the accelerating economy and the recession on performance and practices



Primary Deliverables

- A 20-30 page findings report (Premium MESA members and Premium study sponsors)
- A public summary report (6-8 page) highlighting findings
- Webcast materials - one or more MESA webcasts will be conducted in 2012 (sponsored by MESA) to share excerpts of the study with members and the general public



What's new for this year?

Added topics/Qs

- Data cleansing vs. raw
- Line-level metrics
- Small & test runs
- Electronics or paper charts
- Business issues: M&A, contracting/outsourcing, speed, complexity, demand volatility

Industry specific reports

- Medical device and semiconductor
– thanks to Camstar
- Other industries based on adequate number of responses –

So YOUR response counts!
www.mesa.org/metricsstudy

A vertical rectangular image on the top left of the slide. It features a glowing lightbulb with a blue and green gradient. Inside the lightbulb, there are silhouettes of a propeller airplane and several interlocking gears, symbolizing industry and innovation.

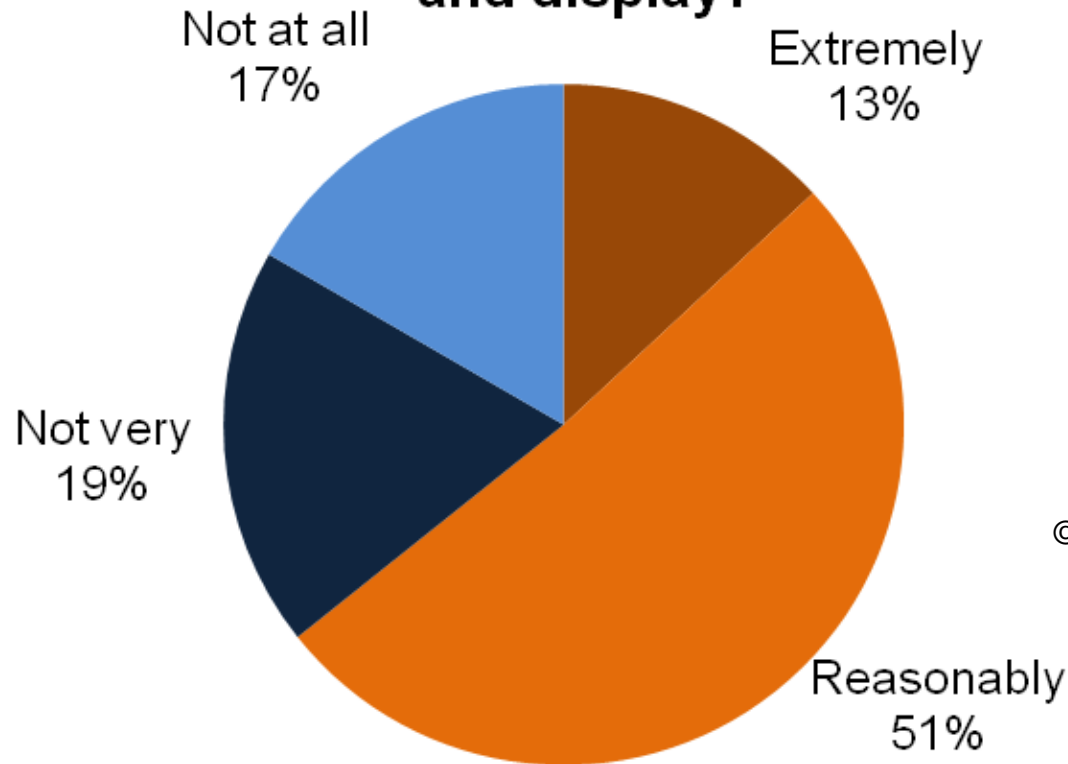
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Sneak preview: Data cleansing usually needed

How necessary is it to have an analyst involved to cleanse the data prior to analysis and display?

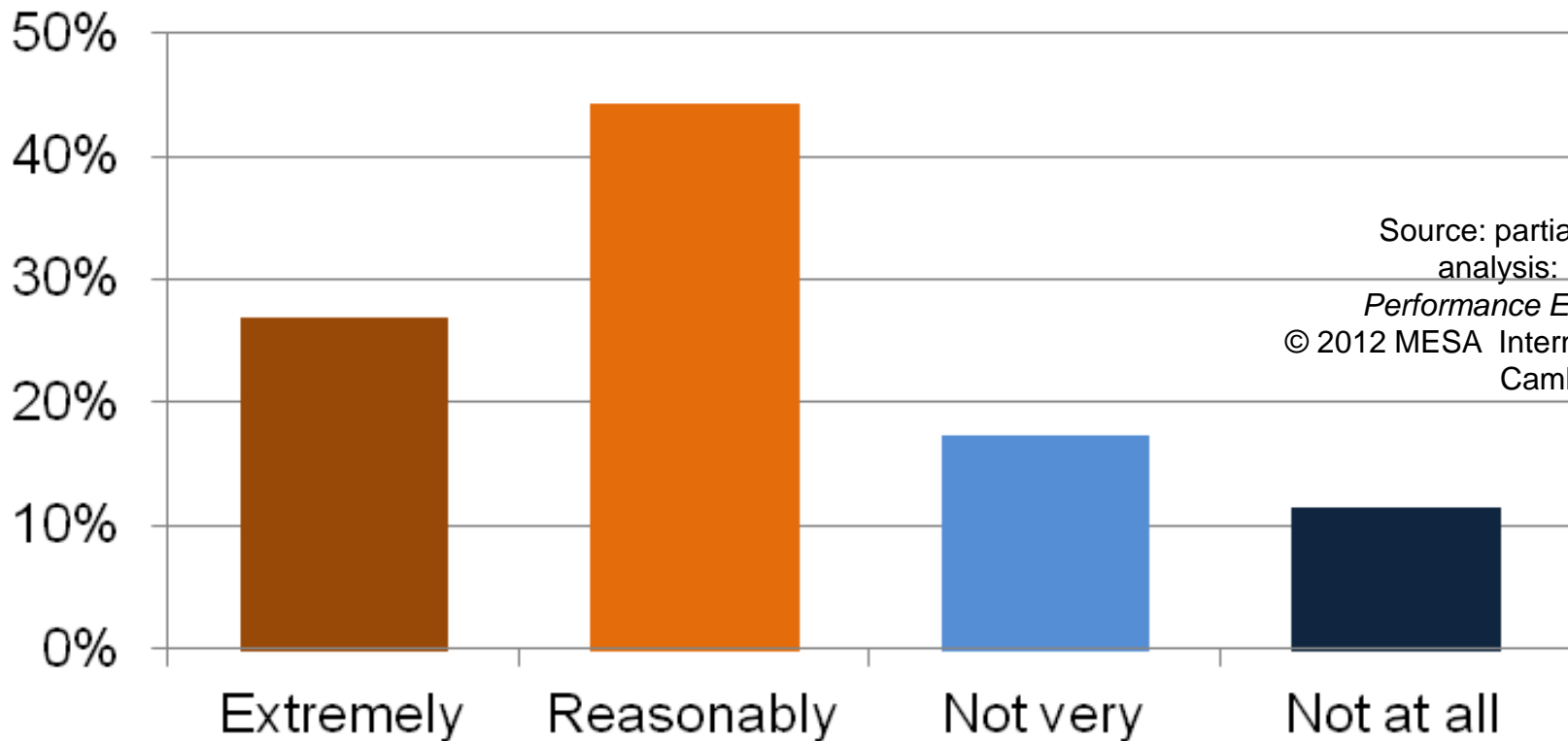


Source: partial data set
analysis: *Pursuit of
Performance Excellence*
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Cambashi Inc.



Sneak preview: Analysis and setup is slow too

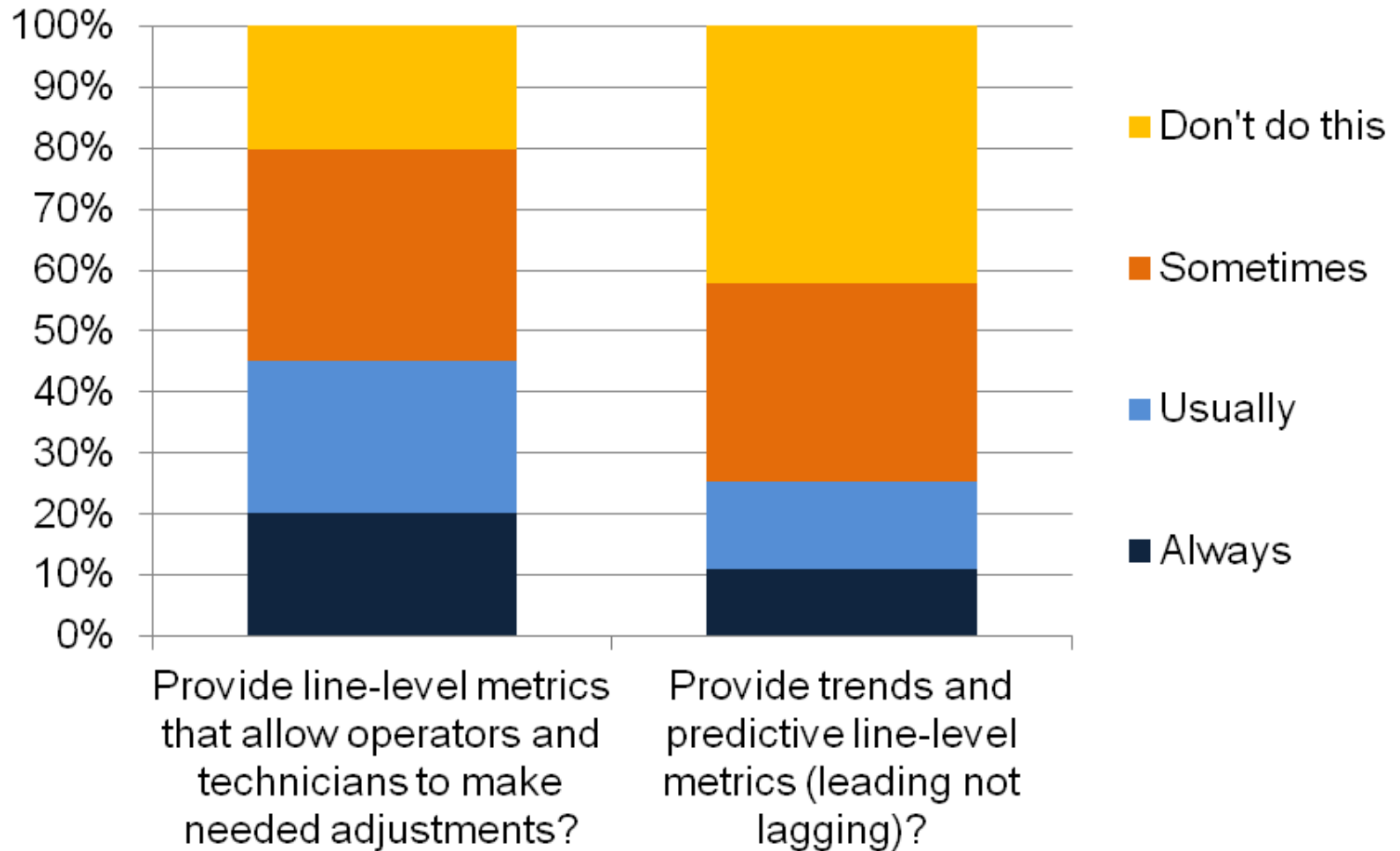
How time-consuming is the analysis and set-up for visualizing results?



Source: partial data set analysis: *Pursuit of Performance Excellence*
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Sneak preview: Line level metrics not set for action



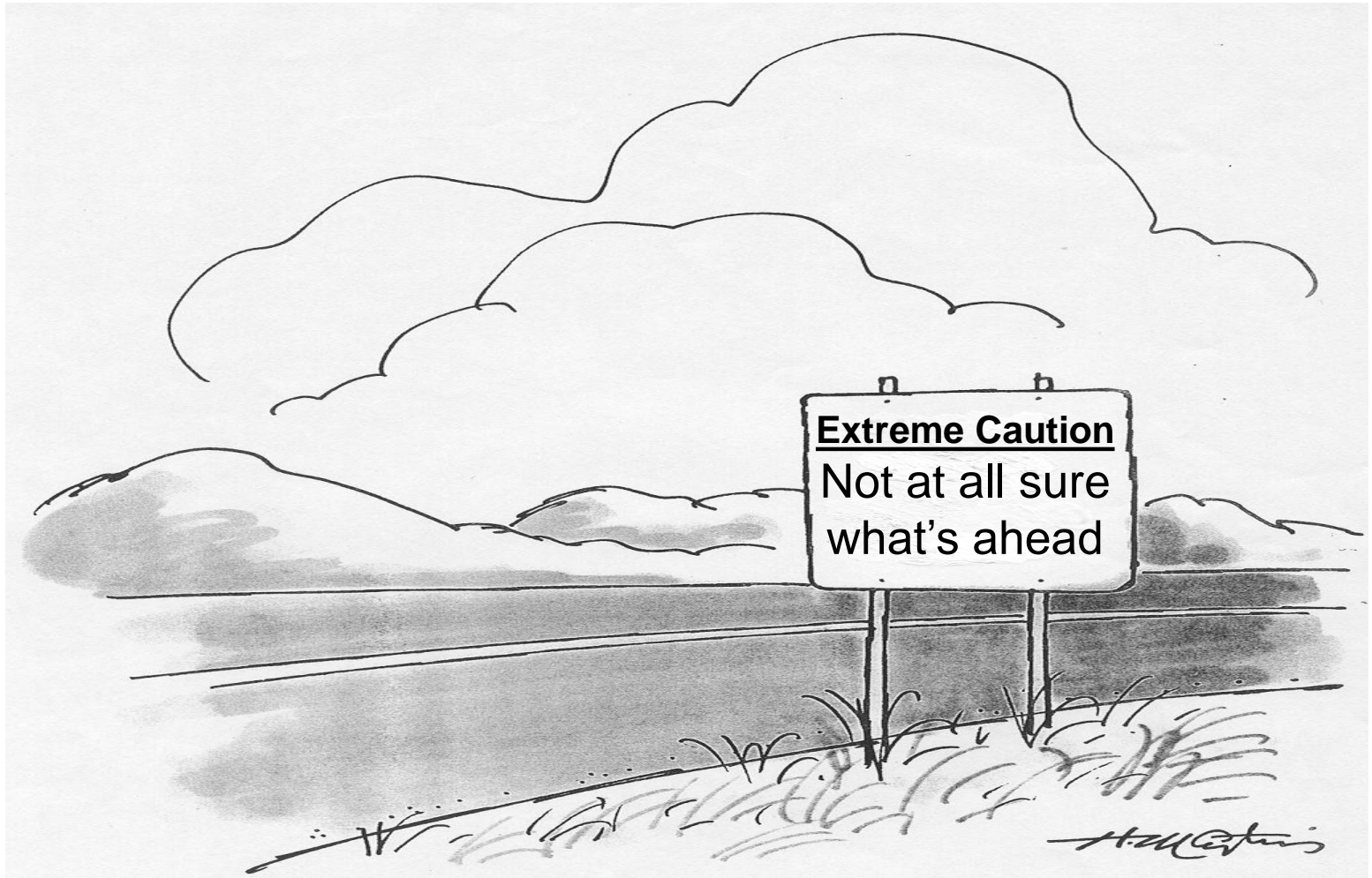


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Challenges for Manufacturers





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Thanks again to Industry Council

- Greg Agnew, A. Schulman
- Tony Jenovino, Campbell Soup Co.
- George Maxson, Cormetech
- Jian Xu, Corn Products International
- Alan Wood, Longview Power
- Steve Kaplan, Murata Power Solutions
- Jean-Marie Deschamps, Owens Corning
- José Luis Maldonado Ortiz, SABMiller
- Ted Bobkowski, consultant
- Others we can't list



Take the Survey – Please!

HOW?

- Look for the e-mail from MESA Headquarters

OR

- Go to www.mesa.org/metricsstudy
- Go to www.cambashi.com and look for this
- Ask one of the study sponsors
- Give me your business card



**Survey closes Monday Nov. 14 –
Please take 15 minutes this week
to take the survey and be counted.**



MESA Metrics Research

Tony Christian

tony.christian@cambashi.com

Research lead: julie.fraser@cambashi.com



2011 European Conference - *Cloudy with a Chance for Profits*
November 9-10, Utrecht, The Netherlands