Metrics at Boston Scientific
Case for Quality Forum

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Metrics Are Our Friend!

**Ideal State: Thinking Ahead**
- Leading indicators
- Anticipate and prevent problems
- Catch problems early, when they are small
- Drive continuous improvement

**Recovery State: Fact-Based Focus**
- Progress indicators
- Priority setting
- Drives change in behavior
- Drives control
Global Quality Process Map
- Global “stewards” and communities of practice
- Measures and metrics review for each process
- Continuous Improvement Maps
**Foundation: Management Review**

**Escalation and Dissemination**

- System Metrics:
  - Timeliness
  - Effectiveness
  - Excursions vs. Targets/Limits
- Site Metrics

**Heat Map**

Management Review Plus:
- Complaint Review Board
- CAPA Review Board
- Functional Reviews
- Audit Readiness Meeting
- Kaizens
- Internal and External Audit Signals
Best Strategy to Bring it Together

Compliance
Lower than Average FDA 483s Per Inspection (2011-2016)

- 483s Per Inspection
  - Industry: 1.8
  - BSC: 0.5
  - 72% Lower

Outcomes
Better than Competitors but Trending Up

- Combined 2014-2015 Units Recalled/$B
  - Medtronic: 364K
  - J&J: 248K
  - Baxter: 217K
  - CR Bard: 192K
  - Stryker: 53K
  - St. Jude: 68K
  - Cook Medical: 63K
  - Edwards: 57K
  - BSC: 16K

- Boston Scientific Annual Field Actions

Efficiency
Achieving Benchmark Cost

- Quality Spend as % of Sales
  - 2013A
  - 2014A
  - 2015A
  - 2016F1
  - 2017
  - 2018
  - 2019

- 2.3% excluding AMS remediation
- 2.5%

Competitors
- BSC

Agility
Simplifying our quality system to deliver increased Speed and Flexibility Measured through VIP

- Delivering 8.5% annual value improvement across QS

Outcomes are all 2015 data

“One language / One Process / Global Collaboration”
“Make anywhere / Ship Anywhere”
Global Quality System Value Improvement

Making Quality a competitive advantage for Boston Scientific, always improving and driving high performance

- Global Quality System site
- Value Improvement – Impact of QS processes across Boston Scientific
- Culture of 8.5% productivity improvement – Quality VIP Engine

Continuous Improvement Toolbox – QS VIP Engine

**Tool 1: Document Maps**
QS Simplification – reduce document footprint and streamline processes creating a more agile Quality System

**Tool 2: Process Maps**
Calculates cost of Global process and identifies key resource drivers and pain points

**Tool 3: Improvement Roadmap**
Translates opportunity into action. Prioritization tool for Global community of practice
Successes at Boston Scientific

- Opportunity identification and prioritization of most valuable actions
- Executive engagement
- Organizational learning
- Proactive approach to the business
- Therefore, better quality at lower cost…for example, $40M in Value Improvement savings for 2016
Tough Issues with Metrics

• Apples to apples: how make meaningful comparisons?
• Consistency across sites and over time
  – System and site metrics easier than technology/product performance
• Need to refresh so do not get stale and to evolve with the business
• Make metrics useful, not punitive
• Data at the right level, driving the right action, up and down the organization
• Get everyone working on the same goals
In Conclusion

• Metrics are hard to implement…

• …and one of management’s most valuable and important leadership tools

• Hang in there to overcome the initial obstacles and reap the value

Metrics are our friend!