Purpose of Presentation

This session will share the collective wisdom of a consulting group practice on the most common process problems found when conducting operational assessments in medical laboratories. The “Seven Deadly Sins” real life examples range from “we always do it that way even though we know better” to the need to challenge widespread accepted wisdom being counterproductive to efficient work practices.

Note: The complete set of slides, additional information, and templates are available after the presentation on the Chi website, www.chisolutionsinc.com. To access, sign into Chi’s website and go to Knowledge Center>Presentations> Roche SmartLab 2011.
Key Learning Objectives

1. To learn the most common inefficient process practices found in laboratories.

2. To assess what “Deadly Sins” exist in the participant’s organization.

3. To develop immediate strategies to address the existing “Deadly Sins” within the participant’s organization.
Sin #1: Lack of Strategic Direction

Confessing my sins:

1. Lack of strategic planning process with:
   - No defined direction.
   - No integration into budget process.
   - Poor department/individual goal setting.

2. We have no space—poor space planning.
Sin #1: Lack of Strategic Direction

Steps to repentance:

1. Develop an integrated strategic planning process with balanced approach:
   - Identify Critical Success Factors (Roadmap).
   - Identify strategic initiatives for each Critical Success Factor (Roadmap).
   - Identify performance metrics to monitor each strategic initiative (Scorecard/Dashboard).
   - Integrate into budget process.
   - Communicate progress monthly to staff—use to guide department/individual goals and improvement initiatives.

2. Develop a formal, prioritized space plan.
2011 STRATEGIC DIRECTIONS

Mission:

Vision:

Values:

In order to move our Mission and Vision forward in FY10, we will focus on the following Critical Success Factors (CSF):

CSF #1: Improve Work Culture / Employee Engagement
- Reduce employee turnover by ??% (Mgrs)
- Implement Action Plans responding to Employee Satisfaction Survey results (Mgrs)
- 100% completion of employee mandatory training by 12/21/10 (All)

CSF #2: Enhance Quality Performance and Patient Safety
- Maintain all regulatory and voluntary accreditations (Med Dir/Quality Mgr)
- Timely completion of major strategic initiatives per established timelines:
  - List individual initiatives (responsible person)

CSF #3: Improve Customer Service / Grow the Business
- Achieve gross revenue target (All)
- Improve overall client satisfaction score by ??% (All Mgrs)
- Implement Action Plans responding to Employee Satisfaction Survey results (Mgrs)

CSF #4: Achieve Financial Performance Targets
- Achieve budgeted total cost per unit of service (UOS) (All)
  - Achieve budgeted salary cost per UOS (All)
  - Achieve budgeted non-salary expense per UOS (All)
  - Achieve budgeted patient related supplies cost per UOS (All)
  - Achieve budgeted purchased services cost per UOS (All)
  - Achieve budgeted UOS per FTE (All)
Balanced Scorecard: Performance Measurements

**Quality Performance**
- Improved patient flow through pre- and post-procedure processes
- Improved flow of information in tech/admin processes
- Improved performance via standardization of processes and implementation of best practices

**Customer Service**
- Improved process cycle time
- Reduction in overall throughput time
- Improved customer satisfaction

**Financial Performance**
- Reduction in cost associated with non-value-added activities
- Improved capture of revenue via process improvement
- Improved operating margins

**Work Culture**
- Improved employee satisfaction
- Reduction in turnover and improved retention
- Improved ability to attract new employees
Sin #2: Poor Financial Discipline

Confessing my sins:

1. Management by “braille”—not having the information or tools to manage the business (lack of benchmarking, realistic metrics).

2. Lack of outreach profitability focus—indefinite use of incremental pricing, no process for handling expensive referral tests.

3. Poor follow-up by hospital billing staff on outreach unpaid or rejected bills (incomplete patient insurance information).

4. Capital needs not being funded.
Sin #2: Poor Financial Discipline

Steps to repentance:

1. Utilize a balanced scorecard approach to identifying which operational metrics to monitor, benchmarking whenever possible.

2. Review outreach profitability by client (include service level, handling of expensive referred testing, billing/collection practices).

3. Request Finance/IT to assist in preparing capital budget requests—review previous year’s approved submissions (start early).

4. Understand the monthly expenses.
## Performance Scorecard Example

<table>
<thead>
<tr>
<th>Performance Monitors</th>
<th>Account-able</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
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<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>FY10 Perform</th>
<th>FY10 Goals</th>
<th>FY09 Year End</th>
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<tbody>
<tr>
<td><strong>Work Culture</strong></td>
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<td>Reduce ??%</td>
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<td>Ongoing</td>
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<td>New FY10</td>
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<td>100% employee annual mandatory training done by 12/31/10</td>
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<td>Maintain all regulatory and voluntary accreditations</td>
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<td>Met Timeline</td>
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<td>New FY10</td>
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<td>Timely completion of strategic initiatives per established timelines</td>
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<td>Achieve gross revenue target</td>
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<td>Achieve Target</td>
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<td>Improve overall client satisfaction score by ??%</td>
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<td>Improve ??%</td>
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<td>Implement Action Plans responding to Client Satisfaction Survey results</td>
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<td>Achieve budgeted patient-related supplies cost per UOS</td>
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<td>Achieve budgeted purchased services cost per UOS</td>
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<td>Achieve budgeted UOS per FTE</td>
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**Color Key:**
- Planned Activity
- On Target
- Off Target, Expect to Recover
- Off Target, Unable to Recover
Monitoring Progress: Maintain the Gains

Outcome: Reduced Patient Wait Time

Monitoring performance will increase the ability to sustain or continue to improve over time.
Sin #3: Bad Attitudes, Lack of Accountability

Confessing my sins:

1. Dilbert mentality:
   - I always do it that way, even though I know better.
   - I don’t have time to do that.
   - I can’t change the way things are.
   - We tried that once and it didn’t work!

2. Covey’s “scarcity” mentality.

3. Abdication of responsibility for the way things are.

4. Not knowing what you do not know.
Sin #3: Bad Attitudes, Lack of Accountability

Steps to repentance:

1. Realize attitude is a choice and choose yours wisely—as a leader, “It’s show time!”


3. Require minimum of two people competent in every key activity/process.

4. Encourage staff to share information that they think you may not know—spend time in the workplace (on all three shifts).

5. If you do not like it, define the problem, identify key stakeholders, and facilitate a solution.
Basic Project Charter Elements

- Problem Statement
- Goal/Objective
- Scope
- Timeline
- Resources/Team Members
- Communication Strategy
- Signatures of Accountability

(Name of Initiative) Project Charter

PROBLEM STATEMENT:
- A specific, quantifiable explanation of the effect or pain the problem is causing within the organization (what, when, where and to what extent). It should not imply a cause, attach blame or responsibility nor should it imply a solution. Include current key performance metric of process or “baseline performance”.

GOAL OR OBJECTIVE:
- Defines the expected outcome or level of performance in measureable terms and is stated in a positive manner (target metric reduction). Include financial performance or return-on-investment expectations (target savings).

SCOPE:
- In Scope: (define what is relevant and to be worked on, include process start and end point)
- Out of Scope: (define what is not to be worked on)
- Constraints: (possible limitations that will affect project outcomes)

TIMELINE:
- Includes start date, expected completion date and general overview of initiative schedule.

RESOURCES / TEAM MEMBERS:
- Project Sponsor – Identifies management level key stakeholder who supports project and ensures resources are available. Eliminates complex or political barriers to ensure project moves forward
- Process Owner – Identifies individual accountable for process of concern, owns implementation and control plans
- Team Members – Identifies representatives from each primary group involved in the process to be included in the team. Caution to limit the number of management members, the most productive teams are comprised of those that work the process every day.
- Key Stakeholders – Identifies main individuals or groups impacted by the process.

COMMUNICATION STRATEGY:
- Define what will be communicated (project progress) to whom (audience/stakeholders), when (frequency of communication) and how (tactics)

SIGNATURES OF ACCOUNTABILITY:
- Dated signatures indicate agreement with Project Charter content and shared accountability in meeting the project goals and timelines. Include Project Sponsor, Process Owner, Project Facilitator and Team Members
Visual Management: Communication Boards

Communicating the Five Pillars of Performance: People, Quality, Service, Growth, and Finance
Sin #4: Focus on Getting Job Done vs. People

Confessing my sins:

1. Limited training for staff—expect too much too soon:
   - Limited career paths, especially in Pre-Analytics.
   - Lack of ongoing customer service and problem resolution training.
   - Instruments “go-live” before staff are fully trained and useful procedures are available.

2. Poor documentation of corrective and preventative actions.

3. Too much emphasis on productivity in high production environments—fear of failure.
Sin #4: Focus on Getting Job Done vs. People

Steps to repentance:

1. Invest in workforce development—make education/training a priority.

2. Develop “user-friendly” system to document nonconformance—focus on process failure first, people second.

3. Involve those who do the work (on all shifts) in performance improvement efforts.

4. Monitor productivity and error rates together; establish realistic goals; communicate.
Educate, Educate, Educate…

SmartLab 2011
(an idea exchange forum)

Chi Solutions, Inc.
Sin #5: Feast or Famine Process Flow

Confessing my sins:

1. Lack of continuous flow—handle workload in batches (especially around staff break time).
2. Staffing not matched to workload volumes—heavy use of full-time staff vs. part-timers.
3. Handling of problems interrupts workflow (e.g., Pre-Analytic staff stop to handle).
4. Lack of defined process improvement approach (not addressing highest priorities).
5. Overprocessing (time-stamping, manual review of results, manually checking manifests).
Sin #5: Feast or Famine Process Flow

Steps to repentance:

1. Implement a standardized process improvement approach/tools and train staff.

2. Assess workflow efficiency of key processes, identify “bottleneck” areas, and prioritize improvement efforts.

3. Limit batch testing; organize handling of process exceptions.

4. Match staff level to workload demand along with activity requirement with skill level.
There are usually three views of a process:

1. What you *THINK* it is..
2. What it *ACTUALLY* is..
3. What it *SHOULD* be..
Simplified DMAIC Approach

**Step 1: Project Definition**
Select and Define Opportunity for Improvement
(Balanced Scorecard, Project Charter, VOC, SIPOC)

**Step 2: Process Measurement**
Understand the Current Process Flow
(Process Mapping, Value Analysis)

**Step 3: Process Analysis**
Understand Relationship of Input and Output Variables
(Cause and Effect Analysis, Fishbone Diagram)

**Step 4: Process Improvement**
Identify, Prioritize, and Implement Solutions for Improvement

**Step 5: Process Control**
Monitor the Process and Celebrate Success
(Control Methods, Keep it Alive!)

Understand Waste and Variation within Process
Sin #6: Failure to Use Purchased Automation

Confessing my sins:

1. Excessive paperwork—failure to use paperless systems when they are available, keeping paperwork “just in case.”

2. Failure to utilize capabilities—autoverification (criteria too tight), online QC, excessive repeats.


4. Installing automation without optimizing processes.

5. Lack of complete system backup.
Sin #6: Failure to Use Purchased Automation

Steps to repentance:

1. Conduct an LIS functional capability audit; validate backup completeness.

2. Assess workflow efficiency of key processes; identify areas of major waste and address.

3. Assess level of instrumentation capability utilization; involve vendor to assess and benchmark within industry.

4. Challenge staff to reduce paperwork; audit what is being sent to storage, how often is it accessed, and disposal schedule.
Improving Workflow—Instrument Placement

Spaghetti Diagram Analysis of Day Shift Workflow

Findings:
- Heavy traffic and bottleneck in specimen processing area.
- Technical workbenches spaced far apart when Techs need to cover multiple areas with overall excessive movement by staff.

Increasing Workflow Efficiency With Minimal Change

Improvement Opportunity: Removal of one panel in each work row redistributes workflow of support and technical staff and improves overall workflow efficiency for all shifts.
Sin #7: Buying and Storing Excessive Inventory

Confessing my sins:

1. Failure to have a good supply inventory process—no established supply par levels.

2. Lack of understanding of laboratory products and needs by centralized purchasing reps.

3. Limited understanding of vendor agreement or contract for standing orders vs. STAT vs. routine order.

4. Ordering large quantities when not expiration- or lot number-sensitive.

5. Hoarders!
Sin #7: Buying and Storing Excessive Inventory

Steps to repentance:

1. Work with Purchasing to assess current supply inventory system—establish reorder par levels; consider use of Lean’s Kanban system.

2. Develop Vendor Contract Briefs on all major contracts (check your GPO “Hot Lists”); include shipping and handling expenses—educate staff.

3. Work with vendors to manage standing orders to minimize inventory build-up.

4. Challenge staff to reduce hoarding; hold an internal “rummage-o-rama.”
Types of Waste (MUDA)

1. Defects
   - Time doing something incorrectly
   - Correcting errors, rework
   - Inspecting for errors
   - Miscommunication

2. Overproduction/Making Too Much
   - Unnecessary testing
   - Doing more than needed
   - Doing something sooner than needed

3. Transporting/Moving Things
   - Extra steps in the process
   - Hand-offs, sign-offs

4. Inventory/Unnecessary Stock
   - Excess supplies on hand
   - Supplies not used before expiration date
   - Instrumentation spare parts that are not critical

5. Waiting
   - For other functions or disciplines
   - Patients awaiting exams in hallways
   - Unnecessary STATs

6. Unnecessary Motion
   - Extra steps and data entry
   - Supplies spread out in work area

7. Overprocessing
   - Handling paperwork not required
   - Process steps that do not add value
   - Data collection for information not used

8. Human Potential
   - Failure to engage people
   - Skill not matched to task
**Visual Management: Kanban Supply System**

**Kanban**: A signaling system to manage and control the movement, production, or supply of material within a process. Kanbans have two primary functions:

- Instruct processes to make products.
- Instruct material handlers to move products.
Visual Management: Kanban Supply System
Open Discussion/Q&A
Which of the Seven Sins is Your “Deadliest”?

1. Lack of strategic direction
2. Poor financial discipline
3. Bad attitudes
4. Focus on getting the job done vs. people
5. Feast or famine process flow
6. Failure to use the purchased automation
7. Buying and storing excessive inventory
I commit to do the following: ________________

Archway Entrance into the Greek Olympic Stadium
Thank you!

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