

Forensic Laboratory Efficiency

Focusing on Simplicity



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Where are you NOW? & Where do you want to BE?
Statewide Drug Chemistry Backlog



A 'Re-Tooling' Initiative
of
The Alabama Department of Forensic Sciences
Continual Improvement

- Efficiency
 - *Work Smarter Incorporating Private Sector Processes*
- Defensibility
 - *Continually Fortify Cases With Objective Evidence To Support Conclusions*
- "Auditability"
 - *To Go Above & Beyond With Underlying Quality Control*
- Scope of Services
 - *To Develop & Acquire New Methodologies*



There's No Magic Here!

The Hamster Wheel of Status Quo



- *"We are often remarkably unaware of how we spend our time, how we interact with others, and how we physically move about. When we do get feedback, it comes from another person, often sounding and feeling subjective, biased, or like a precursor to sanctions. So we end up with information that seems suspect. It need not be that way."*

- *The Heart of Change, Kotter & Cohen*

- *"Our Hamster is doing all they can do...To ask any more would just be inhumane."*

How Do Forensic Laboratories Define Success?

- **Customer Service**
 - **Relevant Product**
 - We Address the Question Posed in the Case.
 - **Quality Product**
 - The Result Must Withstand Adversarial Attack
 - **Timely Product**
 - So Suspects are Identified
 - Habitual Offenders are Removed From the Population
 - No Infringement on Speedy Trial Rights
 - Victim & Family Closure

If Providing A Relevant Product Is A Given

&

Providing A Quality Product is Uncompromising

Then...

What is the Most Cited Affliction Preventing Timely Delivery?

Backlog!

...Do You Agree?

Causes of Backlogs

- Typical Causes:
 - Under Staffed & Under Funded Government Laboratories
 - Inadequate Facilities
 - Increasing Case Load
- Typical Suggested Resolutions (*Status Quo Responses*):
 - Increase Funding
 - Increase Staff
 - Improve Facilities
 - Over Time
 - Screen/Limit Cases
 - Shrink Services

*****The Voice of Change Investigates Efficiency.*

Effects of Backlogs:

- Internal Effects
 - Paralyzed Growth
 - Poor Turn-Around Times
 - Shrinking Services
 - Poor Employee Moral
 - Decreased Level of Commitment
 - Decreased Attention to Details "Nuisance Errors"
- External Effects
 - Hampers Efficient & Effective Investigations of Crimes
 - Crime Prevention Through Earlier Apprehension of Repeat Offenders
 - Delays Court Proceedings
 - Creates Service Vacuum

Backlog... Who's Job Is It Anyway? Well it's Managements Job!

- The Backlog is such a persistent affliction in some laboratories that it has become a necessity...
 - "I didn't create it, why do I have to fix it?"
 - "If we don't have a backlog they won't need us and we may lose our jobs"
or
"We're going to work ourselves out of a job"
 - Negative fantasy
- What if the manager is the obstacle?
 - "Often the biggest obstacle to change efforts is a boss-an immediate manager...Subordinates see the vision and want to help, but are effectively shut down."
 - "The supervisor's words, actions, or even subtle vibrations say, ...**change is stupid**. The subordinate, not being a fool, either gives up or spends an inordinate amount of time trying to maneuver around the barrier,"
The Heart of Change, Kotter & Cohen

Enter Conflict

Clarify the Managers Role!

- Is the **Manager...**
 - Protector of the People (employees) or "Company Man"?
 - Random House College Dictionary:
 - "1. the act or manner of managing; handling, direction, or control...3. the person or persons controlling and directing the affairs of an institution, business, etc..."
 - State Personnel On Management:
 - "The management role of a supervisor's job is to **get work done through others**"
 - "A supervisor's job is to manage their employees, **maintain quality services, and foster a productive and effective work environment**"
 - "...the supervisor's management and leadership abilities are the vehicle and avenue to get their employees to enhance and progress in **performance of quality services**. State employees are servants of the people. As such, should maintain service excellence."

The 'Backlog' is a *Red Herring!*

Backlog May Only Be a Symptom

- Reducing the Backlog Without Addressing the Process is Addictive (*i.e. You'll have to do it again*)
- What if the True Target is the Process?

- *"Obstacles are frightening things we see when we take our eye off the goal."*

- Henry Ford

Identifying Your Obstacles

Changing 'Mind Sets'

- Listen Closely!
 - *"...but I'll do what ever you tell me to do..."*
 - Interpretation: *"I really don't see any value in your suggestion."*
 - *"It'll be a Red Flag to the auditors".*
 - Interpretation: *"I know what we're doing isn't satisfactory but maybe we can hide it until after the audit."*
 - *"We're already doing more than most labs".*
 - Interpretation: *"Don't confuse me with the facts."*
 - *"That's all SWG... requires."*
 - Interpretation: *"I'm good with doing the minimum."*

"When change does come, the experience can be life changing as the person moves from being stuck in the past to leaping into the future."

The Heart of Change, Kotter & Cohen

Emotional Equity

A Deeply Rooted Anchor to the Past

- Obstacles Will Identify Themselves Early!
 - *“Over the years we have bailed them out time after time and their backlog goes right back up...why doesn't management do something about it?”*
 - *“You can't Row & Bail at the Same Time”*
 - *“Sucks to be us”*
 - *“Word of the Month: Unthankful”*
- *“Oh No!...We're going to the Vet...I'm getting a Shot”*

Enter Conflict

The Disclaimer Approach

‘I have an Agenda’

- Some Will Try Smoke & Mirrors
 - *“I'm just telling what I've been hearing”*
- Many times when someone starts with a disclaimer, in actuality they're promoting an ideology in which they identify with.
 - The fact that one or more other individuals share the same ideology solidifies their legitimacy.
 - The longer the idea festers, the more the illusion appears to be consensus

Inferences From The Ivory Tower

Academic Theories

- Dr. Spock – Social Architect or Social Anarchist?
- Natural Laws –
 - Those Laws set by Nature, therefore valid everywhere and every day (i.e. Gravitational Constant 9.8 m/s^2)
 - Teach Me (Classroom Theory)
 - Show Me (Theory in Action, Science Lab)
 - Convince Me
- Academic Management Theories
 - Societies change with the generations
 - Contemporary Management Theories come and go, work then don't work (Fashion)
 - Gravity's Still 9.8 m/s^2
- Management Styles may Differ...
 - The closest thing to a Management Law Remains...
 - Steady Work is directly proportional to Cases Out the Door (Get'er Done)
 - $W = F \cdot d$ or $W = \text{Effort} \cdot \text{Time}$

Enter Conflict

Management By Rumor

'I'm Keeping my Ear to the Ground'

- Communication With an Agenda
 - Some Managers Believe that by Permitting/Participating in the Rumor Mill, Important Information is to be Gained.
 - Does the Amount of Information to be Gained...**REALLY** **OUTWEIGH**...Perpetuating/Legitimizing the Insidious Nature of Rumors?
- Communication is Essential!
 - Constructive Communication Exchanges:
 - FACTS
 - IDEAS
 - PRIORITIES
 - GOALS

Quantifying the Process

Oh No Its A 'Quota'

- The Word 'Quota' Bears a Negative Connotation Associated with an Unreasonable Expectation...
- Resistance to Performance Based Measurements
 - "if you institute Quotas... Mark my words, Quality will suffer..."
 - "performance appraisals based on Quotas ultimately lead to [Dry-Labing]"
 - "Quality sets the pace and it comes on its own schedule"
 - "Do not infringe on my scientific creativity"
- (we're a job...not academia!)
- Well entrenched concepts are hard to dispel!
 - Well entrenched negativity to Quotas is often associated with a more global outlook of the "glass half empty"

Enter Conflict

Quota Systems

(Productivity Indicators)

- Successful Performance Based Initiatives Must Include:
 - Engaged Management
 - Data
 - Reasonable Goals Derived from Data
 - Well defined underlying Quality System...and...
...Implementation of Additional Quality Reviews (*to assess the impact*)
- Poorly Implemented Quota Systems **WILL FAIL!**
 - It should be no surprise!
 - Opponents of Quota Systems Relish in Citing Failed Quota Initiatives!

Little Known

Newton's Third Law of Management

- For every emotional argument there is an opposite but equal emotional argument.
- *Logic Alone* is ill prepared to defeat a well entrenched emotional argument...supplement logic with enough emotion to carry the day...

Enter Conflict

Litmus Test

Are You Ready For A Large Scale Change Initiative?

- Questions:
 - Is it possible to strike a *Balance* between Productivity & Quality when Quality cannot be Compromised?
 - Can there be fair and sustainable *Productivity*?
 - Are you willing to be painfully *Transparent*?
 - Are you willing to increase *Surveillance*?
 - Are you willing to embrace *Conflict*?
 - Are you willing to Sacrifice *Popularity* to Accomplish the *Mission*?
- If Your Answers are No.
 - Slow change may get you there...Hey there's Coffee Outside.
- If Your Answers are Yes.
 - Stick Around There's Plenty to Chew On.

Traveling Without a Map

- *“Visioning requires creativity to see possible futures.”*
- *“...change initiatives fall apart. People without experience developing bold strategies can't figure out what to do next because it's so different from what they've done before.”*
- *“They sometimes back away from the obvious because it's threatening. Or they convince themselves that small modifications in their current ways of operating will achieve the vision-eventually. They may even come to believe that the vision is useless because they can't come up with a strategic plan.”*
- The Heart of Change, Kotter & Cohen

Problem:

-Backlog

Total:

-13010 Cases

Over 90 Days:

-6500 Cases

So Where do we Begin?

Managing Drug Chemistry
“Where are we now! & Where are we going?”
July 24, 2008

First Meeting With Troops

So Where Are We Now?

- In order to develop a viable strategy for the future you **MUST** make an **HONEST & CRITICAL** assessment of where you are **NOW!**
 - Prepare with Surveillance & Intel.
 - Track Data
 - Be Patient & Capitalize on a Defining Moment!
 - Deliver the Plan
- “People change...because they are shown a **truth** that influences their feelings.”
The Heart of Change, Kotter & Cohen
- Prepare for Hurt Feelings...It's a Bitter Pill that's better if it goes down **FAST!**
 - Previous Change Efforts Thwarted by Easing into It (Slow Change)
- Prepare a Before and After Self Assessment.
 - Identify your obstacles.
 - Separate “glass half full” from “glass half empty”

Developing the Plan

Daily Wins
Isn't that Simple!

- The Win
 - More cases go out the door than those that come in.
- Begin by Monitoring Success (*KISS*)
 - Measure by Items not Cases
 - Cherry Picking
 - Beware of Red Herrings
 - Number of Described Items
 - Number of Pages Reviewed
- *The energy expended to Monitor success need only be that required to accomplish the goal!*

“The Yardstick”

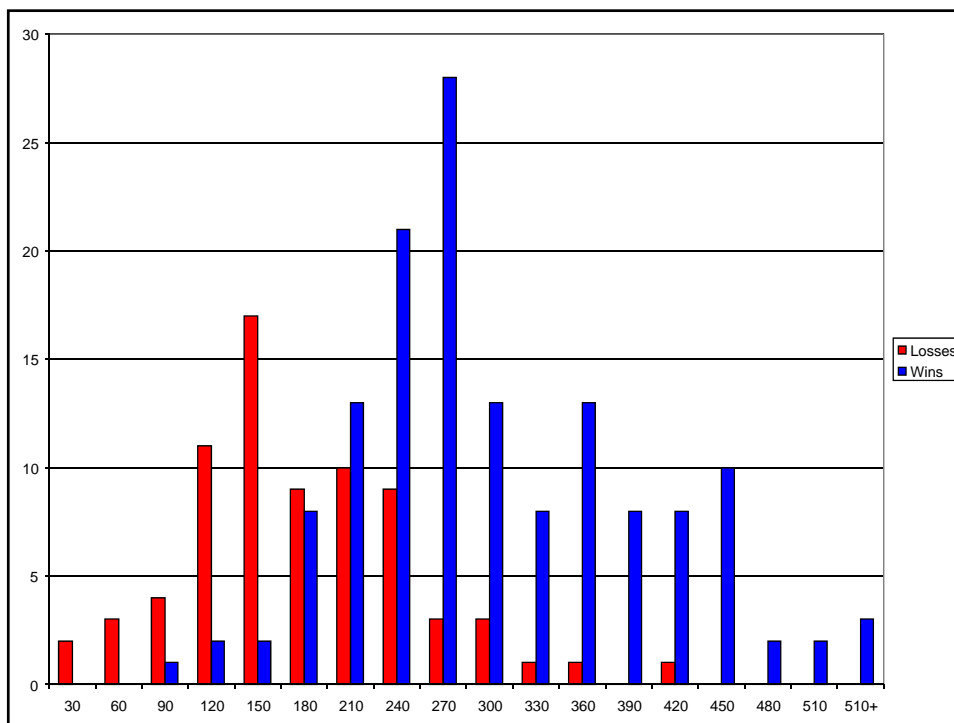
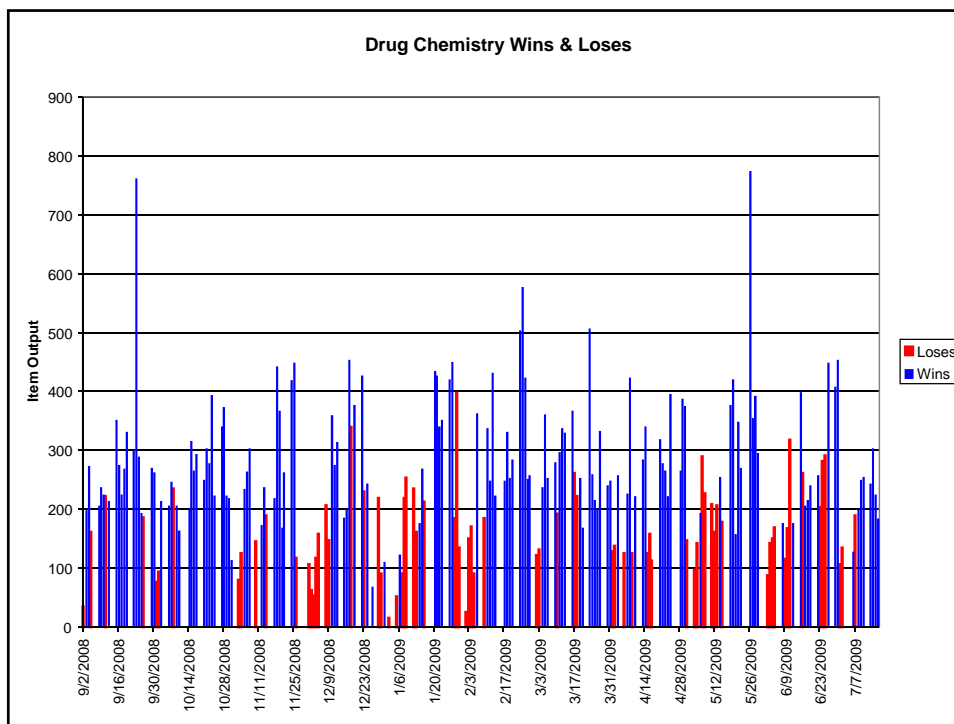
Converting From Cases Worked to Items Worked

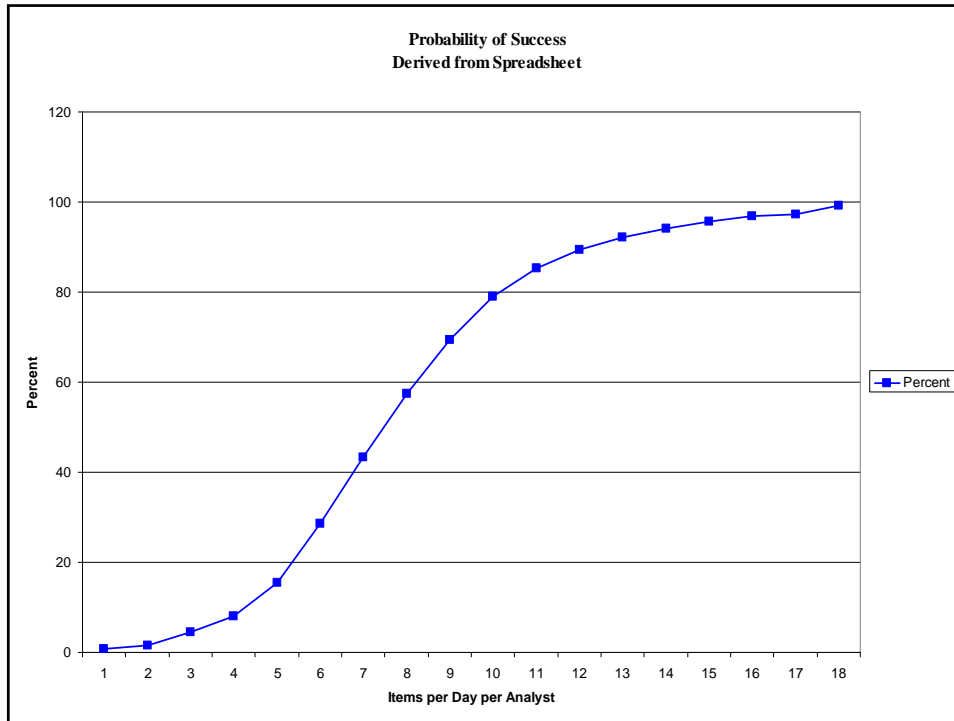
- Item Definition
 - A physical Item
 - Four Case Reviews= One item
- Frequency of Measurement
 - Daily item count (*very important*)
- You Must Have a Goal (*150 items/Month*)
 - 70% Approach
 - Anecdotal Discussions (*10 items/Day/Analyst*)
 - *Preliminary Data*
 - *Validated by “A-Game” Analysis*

Can we Quantify the Probability of Success?

Yes

- | | |
|--|---|
| <ul style="list-style-type: none">● The Stats (<i>Theory</i>):<ul style="list-style-type: none">● Monitor Receipts:<ul style="list-style-type: none">● Approx. 30,000● Monitor Results:<ul style="list-style-type: none">● Approx. 2 items per Case● Resources<ul style="list-style-type: none">● 30 Available Analysts● Yearly Liability<ul style="list-style-type: none">● 60,000 Items/ Year● 2,000 Items/Analyst/Year● <u>8 Items/Analyst/Day</u> | <ul style="list-style-type: none">● The Results (<i>Experimental</i>):<ul style="list-style-type: none">● Monitor Each Day:<ul style="list-style-type: none">● Cases In● Cases Out● Items Produced● Create Spread Sheet<ul style="list-style-type: none">● Winning Days to Items● Losing Days to Items● Tally<ul style="list-style-type: none">● Winning Percentage 65%● Avg. Win 292 Items● Avg. Loss 163 Items |
|--|---|





The Plan

It's a Friendly 'Quota'

- The 70% Theory:
 - If 70% Output is Sustainable and Reasonable (*Friendly Quota*)

...Then...
- The Goal for Each and Every Working Day is:
 - Report 10 Items or Some Combination of Reviews & Items **FIRST!**
 - Work old or Particularly Complicated Cases **Second!**
 - Routine Lab Stuff **Third!**
 - More Items **Fourth!**
- **150 items/month**
 - Builds in Emergency/Optional Time
- *"In successful change efforts, an empowered group of people are very selective in how they spend their time. They focus first on tasks where they can quickly achieve results."*
 - The Heart of Change, Kotter & Cohen

The Plan (*Expectations*)

- Above Average Analysts *Will*:
 - Naturally Over Achieve (200 Club).
- Average Analysts *Will*:
 - Consistently Obtain their 150 Item Goal.
- Under Achieving Analysts *Will*:
 - Struggle for Consistency & Will Require Remedial Actions.

Managing the Plan

- Supervisors Must Manage!!!
 - Daily Monitoring
 - Awareness of each Analysts Progress
 - Intercede Early
 - Maintain a Tally of all Completed Items & Reviews.
 - Identify Specific Reasons Items or Reviews Couldn't be Done FIRST!
 - Data Guides the Way!

When is the Defining Moment?

If it Looks like a Duck, Walks like a Duck, Sounds Like a Duck...It Must be a Duck

- Bring on the Emotion!
 - Remember Logic Alone is not Enough to Uproot Well Entrenched Emotional Equity
- You need a Spark...
 - Unusually Low Monthly Performance
 - Suspect Ideology
 - Displayed in a Public Forum (*Staff Meetings*)
 - Private (*One on Ones*)
- Create a Sense of Urgency
 - *"Without urgency, large-scale change won't happen."*
 - *"The change process needs to move forward quickly or it won't go anywhere at all. If you use a strategy of slow change, chances are organizational inertia will take over..."*
 - *"When there is urgency, more people want to lead, even if there is personal risk and few short-term rewards"*
 - *"With a sense of urgency, an emotional commitment to others on the team, and a deep belief in the vision, change leaders will make the personal sacrifices needed to make the message consistent with action."*
The Heart of Change, Kotter & Cohen
- A Persistent Backlog Numbs Us to Urgency

Deliver

*Why Do We Want To Go Anywhere?
I didn't create the backlog, why am I being punished?*

Simple Economics

- Burden
 - 30,000 Cases per Year.
 - Approx. 2.0 Activities per Case.
 - 60,000 Activities
- Resources
 - Status Quo:
 - Approx. \$4,404,321/yr
 - Salaries & Benefits
 - Limited to \$73 per Activity
 - *Never Erased Backlog*

Show a Truth

30 Analysts to Manage!

- **Cost of Management:**
 - 1.67 Million in Salaries & Benefits
- **ADFS Spends:**
 - Approx. \$55,600 per Yr. to Manage Each Analyst!
- **Status Quo Results:**
 - Analysts Avg. 34 to 276 Items per Month!
 - Essentially Static Backlog
- **Post Project Results**
 - Analysts Avg. *150 to 268* Items per Month!
 - **Backlog Eliminated**

Show a Truth *(that is Eye Opening)*

Tolerant Management

- **Analyst Output:**
 - High (DH), **775 Cases** (Jan '08 – Mid July '08)
 - Sustained Activity Leader
 - Middle (CD), **472 Cases** (Jan '08 – Mid July '08)
 - Dead Center Average
 - Low (CS), **289 Cases** (Jan '08 – Mid July '08)
 - Lowest Sustained Average from a Dedicated Analyst
- **Be Painfully Transparent**
 - Pass Out Analyst Comparison
 - Containing Everyone's Stats

Dispel Excuses with Truths *(that may Sting)* Our Laboratory is '*Special*', you don't Understand!

- Proffered Excuses:
 - Evidence Handling (Average Agency Visits) 1.7 per Day
 - Case Type Disparity (We have more Items/Case) 1.5 per Case
 - Crime Scenes (Time away from Laboratory) 3.1%
 - Court (Time away from Laboratory) 1.8%
 - Leave 5.6%

What They Didn't Proffer... Ouch!

- Misc. Optional (Time away from Laboratory) 15.3%
- Cost of Inefficiency (Comp. Time) 38.6%

Dispel Obstacles with Truths (Undeniable) *We could do it if our LIMS wasn't so Slow!*

- March & June '08 LIMS Crippler
- June '08
 - 644 (29.4%) Cases Reviewed on the **LAST DAY!**
 - 52.3% Cases Reviewed in the last **4 DAYS.**
- March '08
 - 598 (20.7%) Cases Reviewed on the **LAST DAY!**
 - 53.9% Cases Reviewed in the last **5 DAYS.**

With Truths

Identify Bad Habits & Quantify Their Effect

- Symptoms
 - End of Month Review & Reporting
 - Provide Plots
 - “Cherry Picking”
 - Creates Super Backlogs
- Cost of Under Achievement
 - Actual Cost per item
 - Lab A – \$50 per item
 - Lab B – Over \$100 per item
 - “Virtual Unrealized Cases”
 - Under Achiever Item Counts (*150 items expected – Actual items*)
 - **Converts to Aprox. 5000 Cases Unrealized Per Year!**

Assure Them They Can't Compete Without:

- A Plan
 - A Plan Must:
 - Arrange Activities (*Status Quo: “They Figure it Out/Priority Death & Rush”*)
 - Clear Goals (*Status Quo: “Keep it under 90 Days”*)
 - Be Measurable (*Status Quo: “They do Their 75 Cases”*)
- Without Engaged Management
 - With Active Monitoring, Assessment & Coaching

Discipline Management

Steady Output Approach

- What is Steady Output?
 - Theoretical Curves
 - Desirable
 - Stair Step Curves
 - Erratic Output
 - Drift & Catch Up
 - Erratic Output
 - Unsafe Case Work and/or Reviewing Practices
- Quality Managers: *When is the Quality System at Greater Risk?*
 - When there exists closely monitored management system that prescribes a steady & consistent output...
 - Or a loosely monitored system that allows analysts to drift and hurriedly catch up...
 - The 'Quota' never changed (Pre project 75 cases, Plan 150 items)
- Plot Daily Output for:
 - Discipline
 - Sections
 - Analysts

Accountability

Talk is Cheap

- Accountability
 - Can not exist without consequences
- When consequences can not be mitigated the last ditch effort is:
 - Play the Emotion Card
 - *"they're managing by fear and intimidation"*
 - *"People in change-successful enterprises do a much better job than most in eliminating the destructive gap between words and deeds. Deeds speak volumes."* ... The Heart of Change, Kotter & Cohen

Accountability Letter

(The Forming of a Partnership)

- Body of the Letter:
 - Tone
 - Polite, Factual & FIRM!
 - Identify the Individual Problem
 - Provide Context (Departmental Goals or Initiative)
- Critical Elements (Acknowledge with Initials or Verbiage):
 - Verbal Instructions & Written Instructions Given.
 - Affirm Written Instructions Understood.
 - Provide Room to Detail Obstacles Preventing Accomplishment of Goals
 - Affirm that in the Absence of Obstacles *They* can accomplish the Goal.
- It's Managements Job to Remove or Dispel Obstacles!
- Upon Relapse the Employee Enters into Progressive Discipline.

I Can, I Can't, I Won't

First Month

- You have a short time to determine the underlying nature of your players.
- **Verbally** (*very important nuance*) Coach your Players with their objectives.
- At the Conclusion of the Month:
 - Performance will identify the "*I Cans*"!

I Can't or I Won't

Second Month

- Provide (*Accountability Letter*):
 - Written communication of goals
 - Identification of obstacles
 - Affirmation that goals are achievable.
- Without Obstacles “I Can't becomes “I Can”

I Won't

- Third Month:
 - Start Progressive Discipline
 - Discipline Handbook pg 6.
 - *“In some cases, a supervisor may find that an employee's behavior is hindering productivity. Counseling should be used at the time a supervisor is monitoring performance and notices the problem.”*
 - *“On these occasions. The supervisor must think of the responsibility of state employees. Each Merit System employee is to receive their position based on merit and competence. Each Merit System employee is to be promoted because of merit and competence. Likewise, each Merit System employee is to maintain their job based on merit and competence in fulfillment of their responsibilities. An employee that fails to demonstrate this competence and fulfillment of duties, after extensive time and effort working through the discipline process, may need to be terminated.”*
- We must be good stewards of the State's Resources!

Challenge Suspect Ideology

Handling Conflict

- *“Praise in Public, Scold in Private”*
- Without Statutory Exception a Public Employees Activities are Public.
 - It’s everybody's business
 - Public Discussions
- Influential Voices
 - The more influential the voice... The more **Intense** the Challenge needs to be.
- Challenge the Perpetuation of Mediocrity
- Good People can resist Poor Behavior

Short-Term Wins

- Don’t Let Up
- Transparency
 - Publish Backlog/Oldest Cases Daily
- *“Without early wins that are visible, timely, unambiguous and meaningful, change efforts invariably run into serious problems.”*
- *“The most common problem at this stage in change efforts is sagging urgency.”*

The Heart of Change, Kotter & Cohen

A-Game Analysis

30 Analysts

	Cases/yr.
● A Game	48,054 (Theoretical Max.)
● 2 nd	41,582
● 3 rd	39,230
● 6 th	35,177
● 8 th	33,728 (70% of max. 33637)
● 12 th	30,071 (approx. 30,000 cases annually)

Reward

Make Change Stick

- 200 Club
 - Monthly Meeting of Over Achievers
 - One time 200 items or Sustained 200 item Avg.
 - Technical & Managerial Training
 - Inter-laboratory Case Reviews
- This is the Core of your new Culture!
- *"Large scale change does not happen without a powerful guiding force."*
- *"A fragmented management team cannot do the job, and a hero CEO doesn't work either."*
- *"A powerful guiding group has two characteristics. It is made up of the right people, and it demonstrates teamwork."*
- *"The **right people** aren't necessarily part of the existing senior management"*
 - *"And don't forget the new culture when you hand out promotions. **The right promotions make those that truly reflect the new norms more influential, thus strengthening those norms.** By putting into power those people who have absorbed the new culture, you create an increasingly stable and solid foundation."*

• The Heart of Change, Kotter & Cohen

Dale's Perspective

- First Impressions:
 - There existed a deeply entrenched Paralysis fueled by “*What ifs*”.
 - Debate without a defensible position was “*Whining*”.
 - Clearly we all agree discipline is essential “*unless it's my child*”.
- Accountability is Essential!
 - Demanding accountability is not “*he's picking on me*”.
- Four Commandments to make Your Department Better
 - Thou Shall Not Whine
 - Thou Shall Not Make Ordinary Conversations ‘*Squirrelly*’
 - Thou Shall Not Participate in ‘*Analysis Paralysis*’
 - Thou Shall Not “*Transfect*” Others With ***Anonymous*** Suspect Information
 - Transfer + Infect = “*Transfect*”

Make Change Stick

The Heart of Change, Kotter & Cohen

- “*Tradition is a powerful force...Change sticks only if you create a new, supportive and strong organizational culture.*”
- “*Change is often held in place solely by a guiding team, a central player in such a team...You may think you have built a sturdy, yet not notice that the walls are being held in place by the construction crew. Eventually, the crew leaves, and gravity takes over. The culture isn't there to support the building.*”
- “*Culture means the behavioral norms and shared values in a group of people. It's a set of common feelings about what is of value and how we should act...It's hard, because creating a new norm means you need to change deeply embedded norms.*”
- “*Be sure new employees are introduced to the culture early on.*”

You Have Good People!

It Begins and Ends with Vision

- *They may be unaware of how they spend their time, how they interact with others, and how they physically move about...*



- *With Engaged Management Providing:*

- *Clarity*
 - *The Silent Leaders will Emerge*
- *Accountability*
 - *Those easily motivated will see the Vision*
- *Consequences*
 - *The stubborn will Eventually achieve the Minimum*

End Results of Simplification

- | | |
|----------------------------|---------------------------|
| ● Beginning Backlog | Current Backlog |
| ● 13,000 Cases Receipts | 3,300 (1.3 Months) |
| ● 6500 > 90 Day | 0 > 90 Day (89 > 60 Days) |
- ***Simplification** is the Path to **Efficiency**...*
 - ***Efficiency** is the key that unlocks **Potential Resources**...*
 - *With additional **Resources** (personnel)...at no increased capital expenditure...**Redirection and Reallocation** become **Possibilities** (this is the way to build your bench strength for future growth)!*
 - ***Losing can become a habit – so can Winning!***

Beware of the Status Quo Hamster Wheel!

A whole lot of squeaky activity for a false Journey.

