

Claims Process Reengineering and Predictive Analytics

CLRS 2013

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Critical thinking at the critical time™

Agenda

- Overview of Claims Process Reengineering
- Claims Leakage Defined
- Implementation of Changes to Claims Process
- Monitoring & Analysis

Introduction

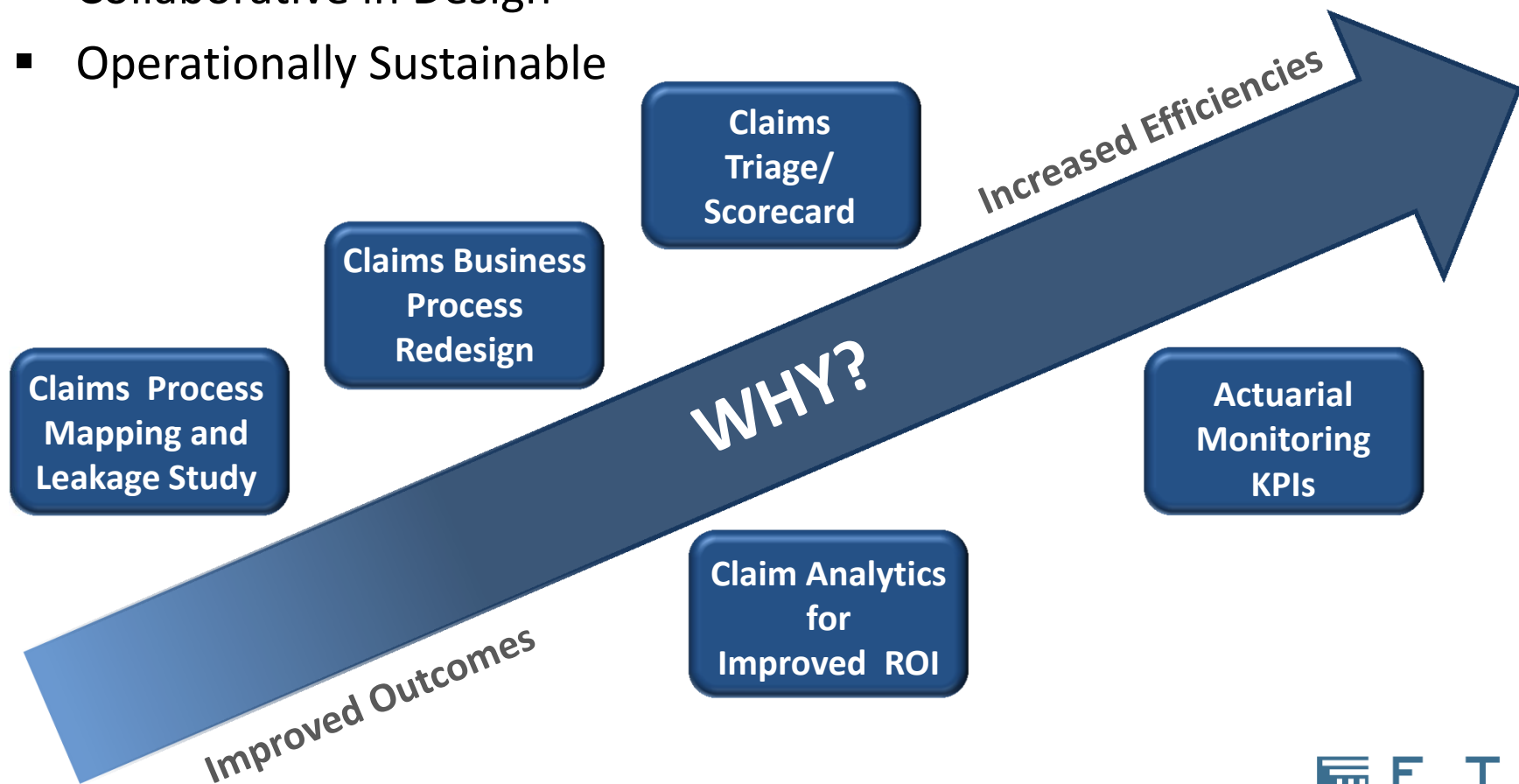
Claim Process Reengineering - in Actuarial Context

- The actuarial starting point is generally historical claims
- Normally, claims process changes means:
 - Faster settlement
 - More adequate case reserves
 - Tighter controls with uncertain import
- For the bulk of the claims, not the few jumbo's and not the numerous small items, can claim process change the actual cost of the unpaid or future claims?

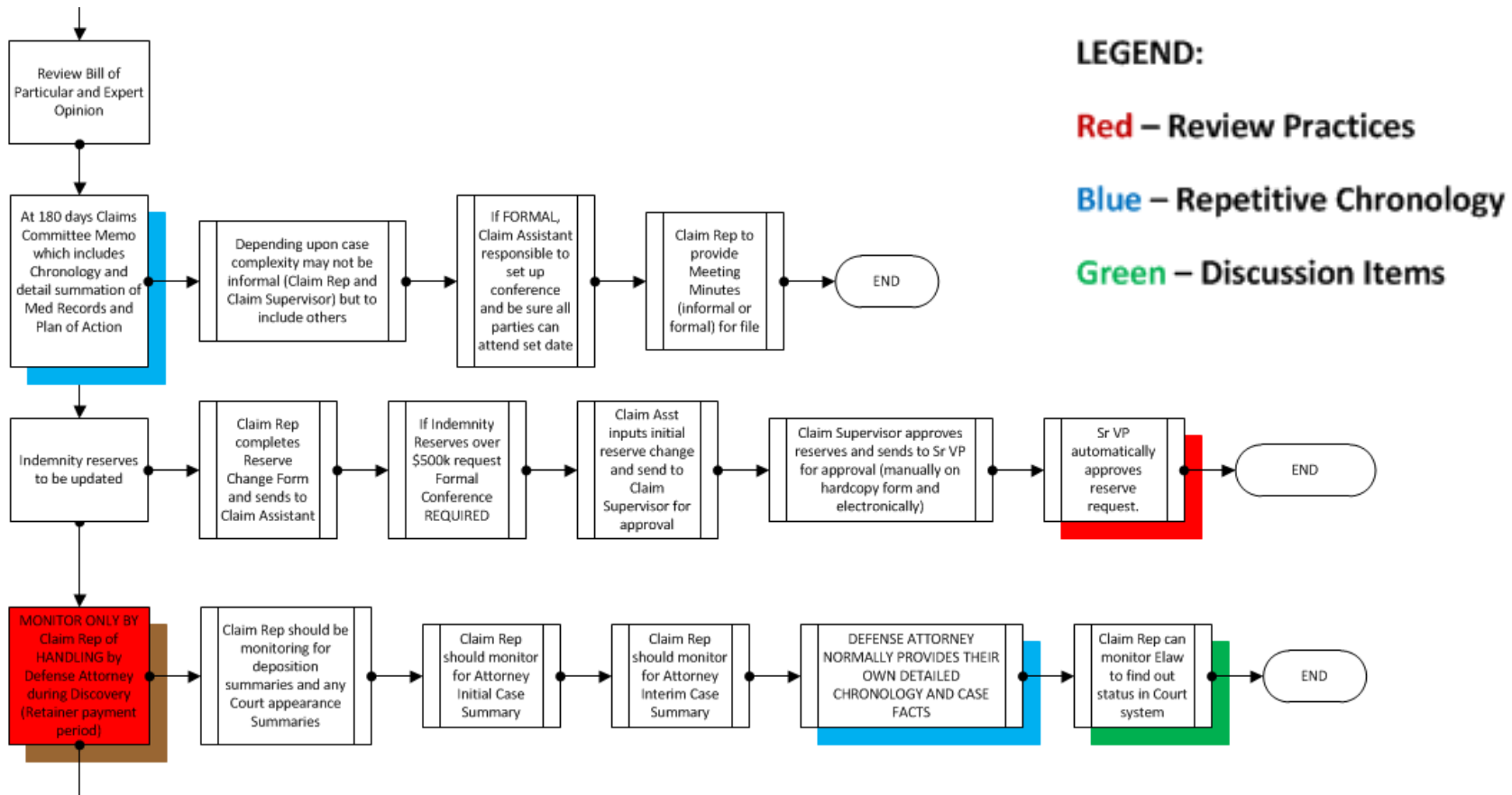
Claims Process Reengineering and Predictive Analytics

Combining several stand-alone Claims and Actuarial concepts to improve Total Outcome Management over Claims

- Holistic in Scope
- Collaborative in Design
- Operationally Sustainable



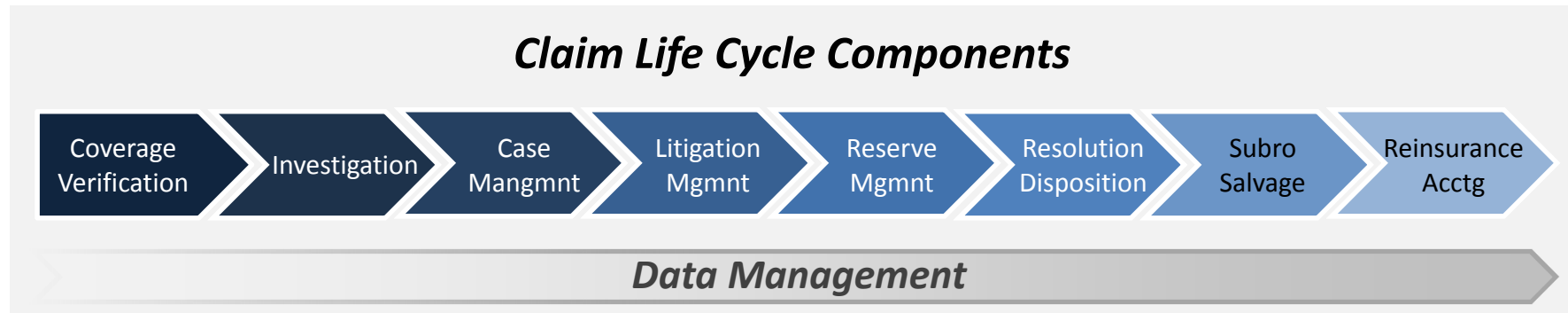
Claims Process Mapping and Gap Analysis



- Process mapping establishes “as is” workflows
- GAP Analysis targets
 - Inefficiencies/Redundant processes
 - Potential sources of claims leakage
 - Opportunities for supply chain improvements

Claims Leakage Defined

Claims Leakage is a methodology which measures difference between a claim's actual ultimate net loss costs against the claim's target cost



- Typical outputs serve as an index of claim management performance across the claim's process life cycle
 - Results are expressed as either \$\$ or % impact of failure to consider Best Practices
 - Provides baseline for targeted areas of process improvements
 - ◆ Cycle-time
 - ◆ Proper evaluation of Liability
 - ◆ Proactive case management
 - ◆ Litigation management cost-containment
 - ◆ Improving Total Outcome Management in both DCC and Indemnity

Claims Leakage To Evaluate Process Improvements Opportunities

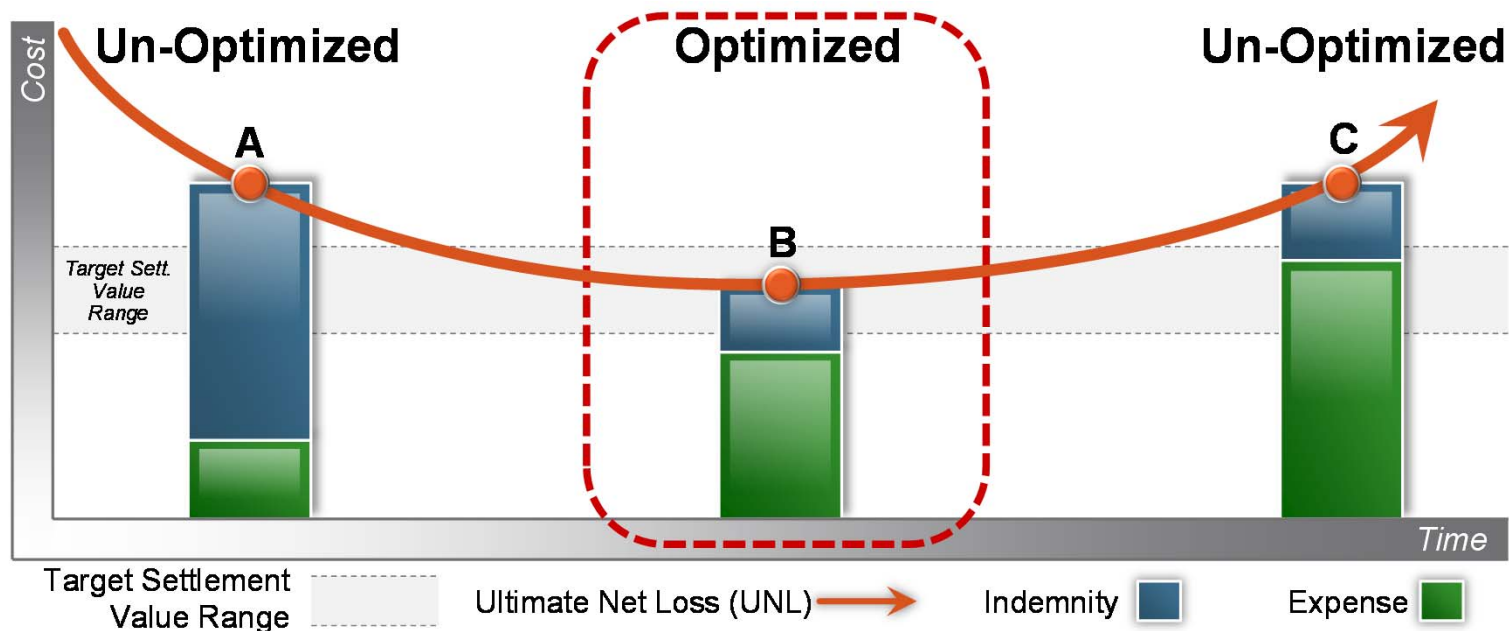
- Leakage targets a review of recently closed-settled claims
 - Recent date of claim closures describe the current claims operating environment
 - Sampling is actuarially developed based upon claims and actuarial agreed upon factors
- Leakage parameters are set by consensus with Leakage team management: combination of claims, claims legal and actuarial
 - Minimize subjectivity of interpretation of leakage testing conditions
 - Agreed upon weighting of test standards across the total life-cycle of claims resolution process
 - Quality assurance includes multiple reviews of claims to further minimize subjectivity
 - Where leakage exists, specific mitigation steps are identified

Claims Leakage Outputs and Analysis Direct Us to Areas for Redesign

- Issues of Loss Recognition
 - Alignment of facts development and, reserve and exposure recognition
 - Level of understanding of return on investment in DCC to Ultimate Net Loss
 - Scale within the general claim population – not all claims are created equal

Claims Return On Investment Model

Total Outcome Management



Claims Leakage Applied

CLAIMANT

Age: 52

Sex: M

Claim Life Cycle: 3.2 yrs

Ultimate Let Loss: \$375,000

Description: Spinal fusion, documented liability, settlement prior to trial

Claim Life Cycle	Weight (%)	Actual (%)
Coverage Verification	5	5
Investigation	10	8.5
Case Management	20	16
Litigation Management	20	14
Reserve and Financial	10	6
Resolution/Disposition	20	17
Subro/Salvage	5	5
Reinsurance/Accounting	5	5
Data Management	5	3
	100	79.5
Leakage:	20.50%	\$76,875
Target Settlement Value:		\$298,125
Optimal Life Cycle:		2.8 years

Claims Leakage Outputs and Analysis Direct Us to Areas for Redesign

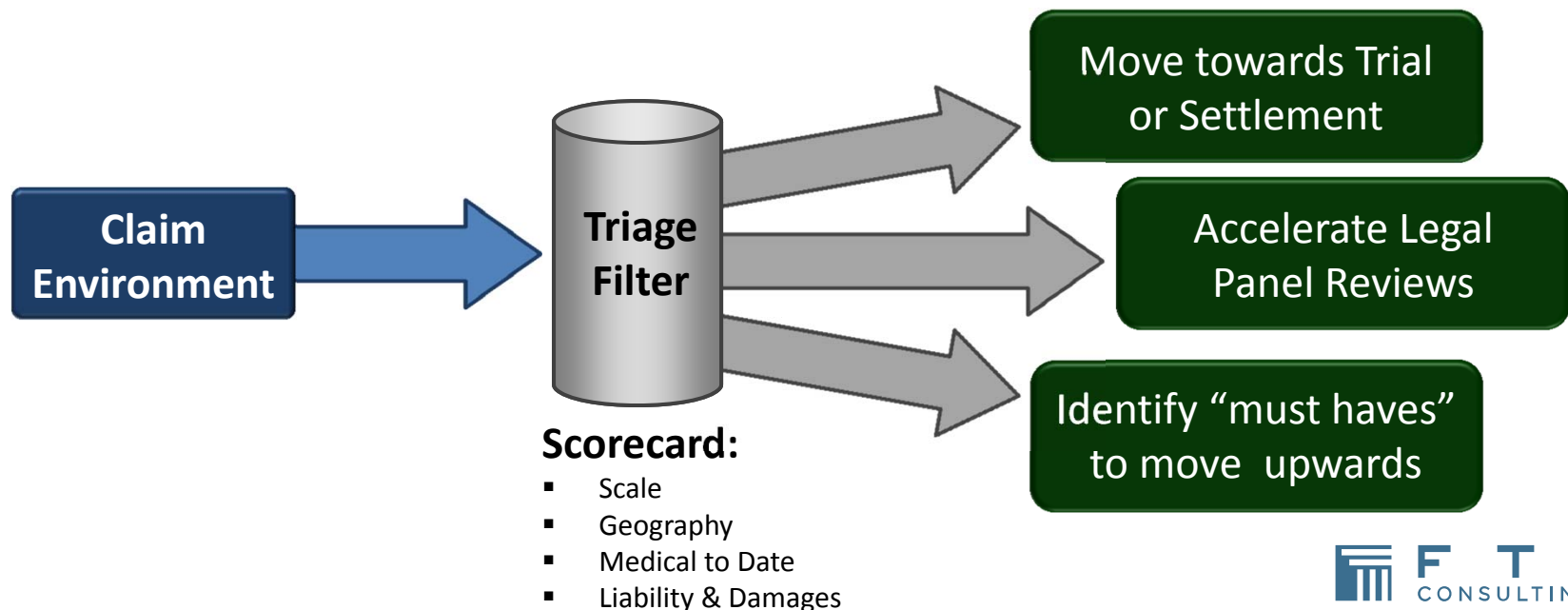
- Drivers of cycle times in claim management
 - Perception versus reality in acknowledgment of liability
 - Decisions to defend versus settle
 - Effects of “hand-offs” between adjusters, experts or attorneys
- Key management issues
 - Proper resource allocation – “right person for the right job”
 - Triage for straight-through processing opportunities
 - Process inefficiencies
 - ◆ Coverage confirmation
 - ◆ Strategies for co-defense

Redesign Integrates Leakage and Process Flow Improvements to Improve Results

- Shortening of cycle-times in claims life when available
- Lowering of Indemnity and DCC through an improved Claim ROI model
- Improved “segmentation” reflecting varying scale of claims allows great control over the claims management process
- Development of a framework for continuous improvement which supports
 - Ongoing redesign activities
 - Viral halo effect of new processes support
 - ◆ Cultural change management
 - ◆ Management ownership
- New processes tied to agreed upon Key Performance Indicators (“KPI”s) supporting all sectors of the enterprise: claims, underwriting, actuarial, finance

Redesign Integrates Leakage and Process Flow Findings to Drive Improved Total Outcomes

- Functional re-design seeks to optimize Total Outcome Management
- Greater integration of legal/commercial considerations and Medicine
- Segmentation and triage of claim population to recognize High to Low opportunities
 - Uses simple to complex data analysis to identify opportunities for high total outcome resolutions
 - Tests claims sub-populations based upon common characteristics (“tranches”)



Claims Redesign – Implementation of Redesign

Claims Process workflow is targeted based upon the triage and scoring of claims

- Claim tranche populations are triaged to identify opportunities
- Each sub-population is scored by claims units on a 1 -30 numerical ranking
- Claims with scores above 20 are moved to newly created Claims Resolution Specialist to resolve
 - Scores support claim readiness for resolution
 - Triage supports likelihood of success in negotiations

CATEGORY	1	2	3	Score
Coverage:				10
Value:	undetermined	determined		2
Litigation stage:	pre EBT	Pre NOI	Post NOI	3
File Completeness:	lacks many deps or reviews	lacks one dep or review	all deps & reviews in	3
Insured as target:	peripheral	co-target	target	3
Liability:	minimal	moderate	high	3
Stay:	yes	lifted	none	3
Dispository Motion:	pending/appeal		denied or not an issue	3
Score:				Total: 30

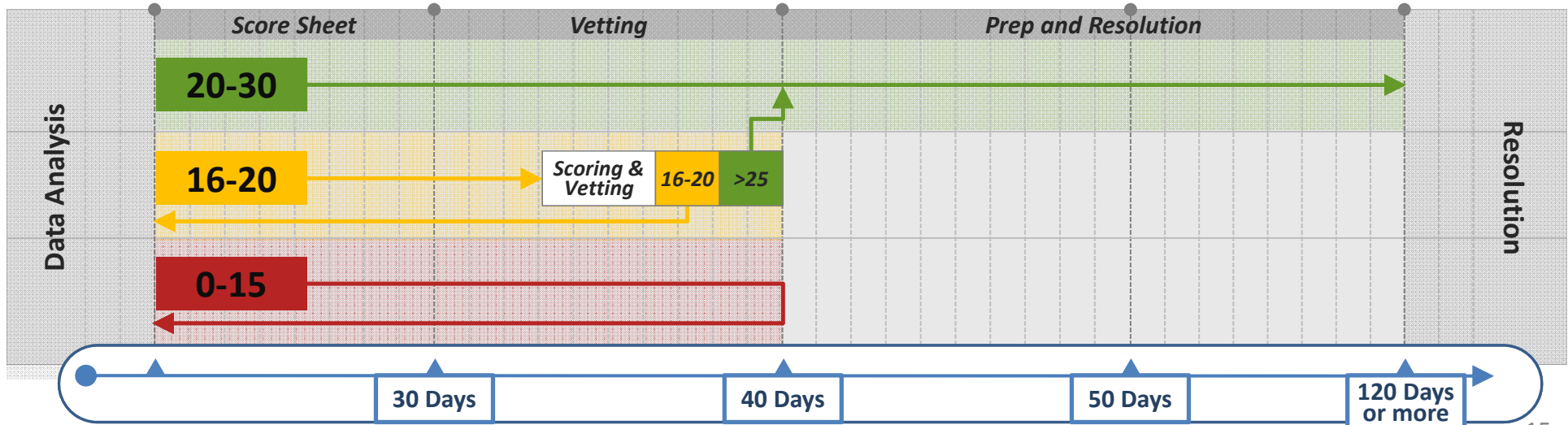
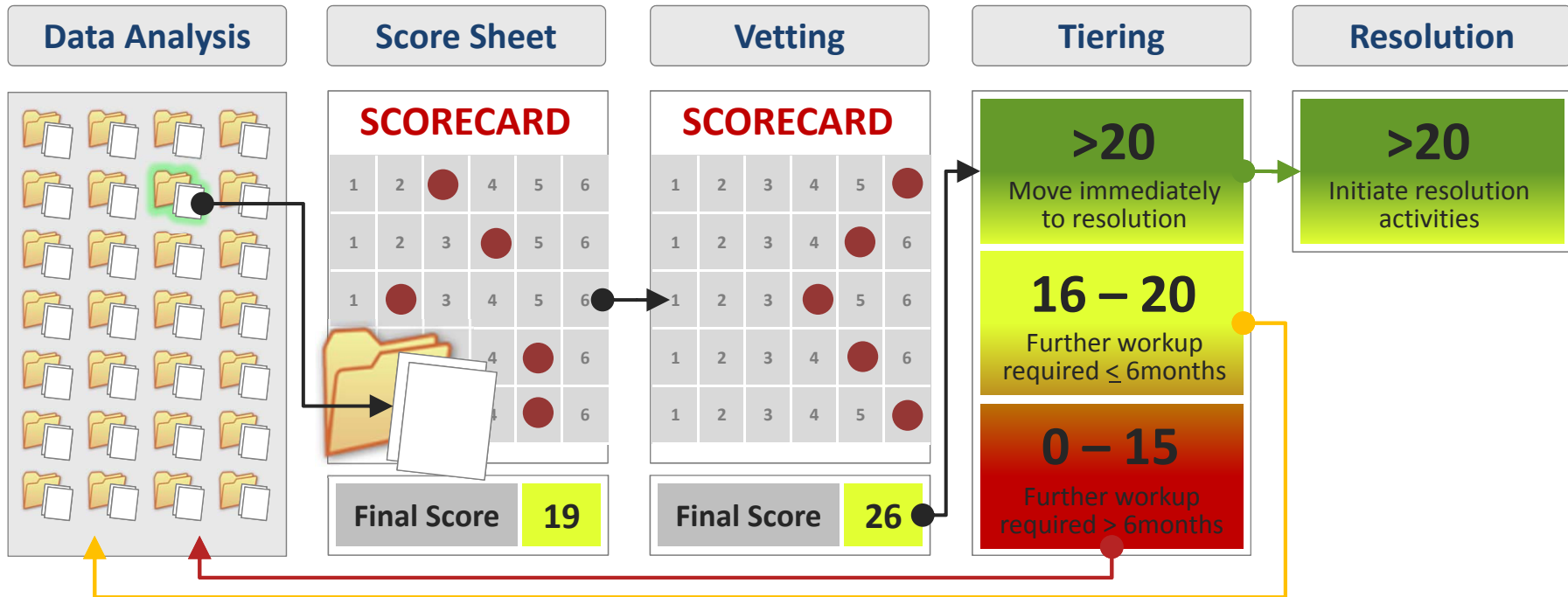
(1)10 - 1 = Approval Unlikely,(5) = 50/50 Approval, (10) 10 = Approval Not Required

	Jury Verdict		Settlement		
Def atty values as	Insured:	JV Low	JV High	SV Low	SV High
	Globally:	JV Low	JV High	SV Low	SV High
Comments:					
A score of 30 would indicate a high probability that case could be moved.					
A score of 10 would indicate that this would not be a case to attempt to move.					

Claims Triage – Data Mining and Analysis

- Better, bigger and more comprehensive data spells larger opportunities
- Begin analysis with single variable analysis conditions e.g.,
 - Claims stratified by age
 - Claims by status: litigated, non-litigated
- Compound variables based upon initial results to focus on high-yield tranches
 - Claims > 24 months where
 - ◆ Claim severity is neck/back and, where
 - ◆ Claimant represented by ABC plaintiff firm and, where
 - ◆ Venue is Suffolk and Queens county and, where
 - ◆ Discovery is complete
- Tranched claims are scored and high scores triaged to special handling units for accelerated resolution
- Tranches with high yield results are further mined

Redesign Triage and Resolution Process



Monitoring & Analysis for Claims Department

A system to monitor results from a redesigned claims department will manage work flow and provide data available for analyses in support of continuous improvement

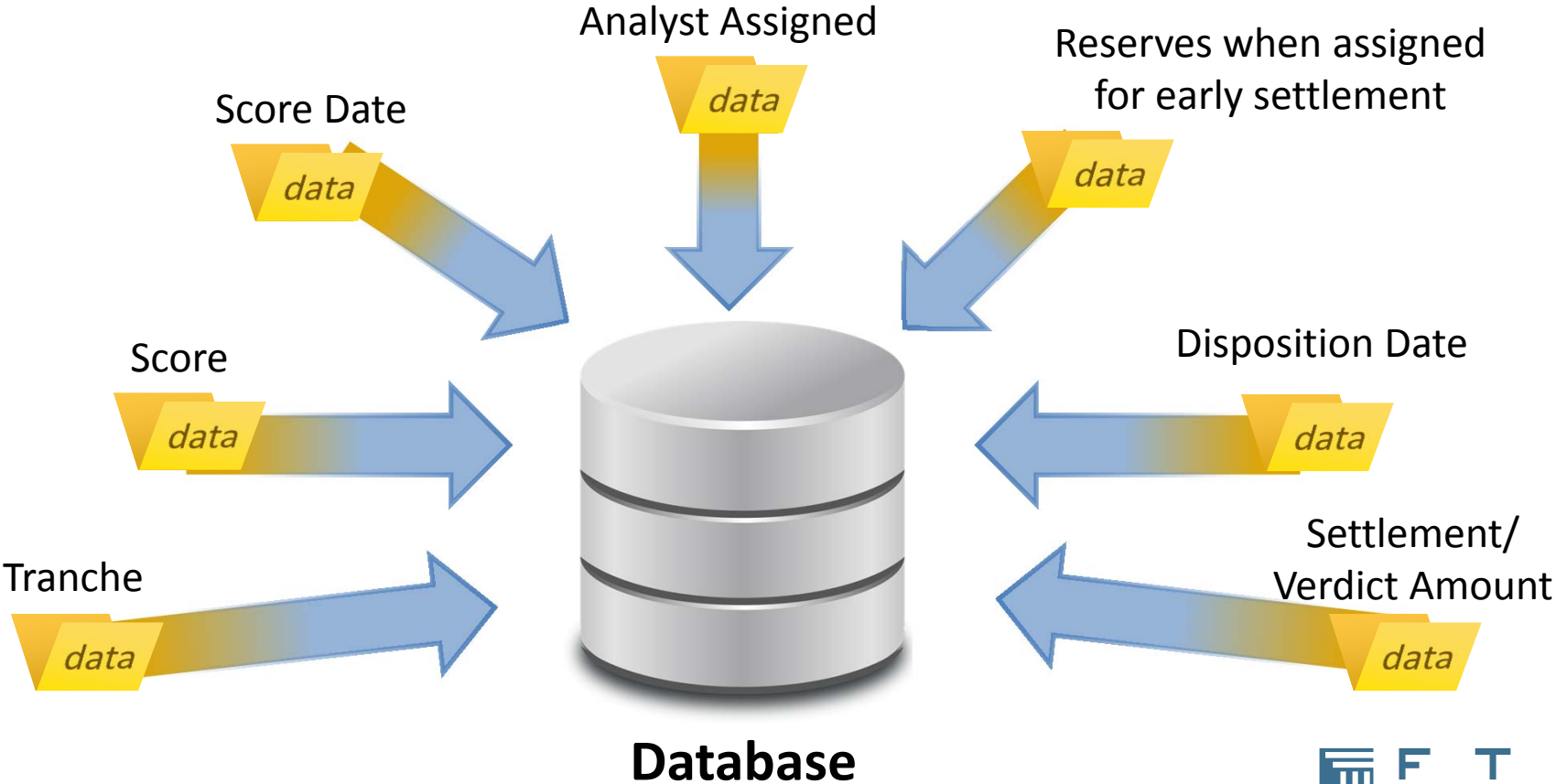
WHY?

- Supports improved results obtained through redesign – Key Performance Indicators (“KPIs”)
- Claims population makeup changes with time – tranches that are high yield may change with time due to a variety of factors
 - Older-pre redesign tranche populations are exhausted and closed
 - Changes in venues or jurisdictional considerations
 - Changes in legal theory or tort require reactive changes in processing

Monitoring & Analysis for Claims Department

A system to monitor claims can be developed to manage work flow and provide data available for analyses.

All Claims Scored 20 or Greater

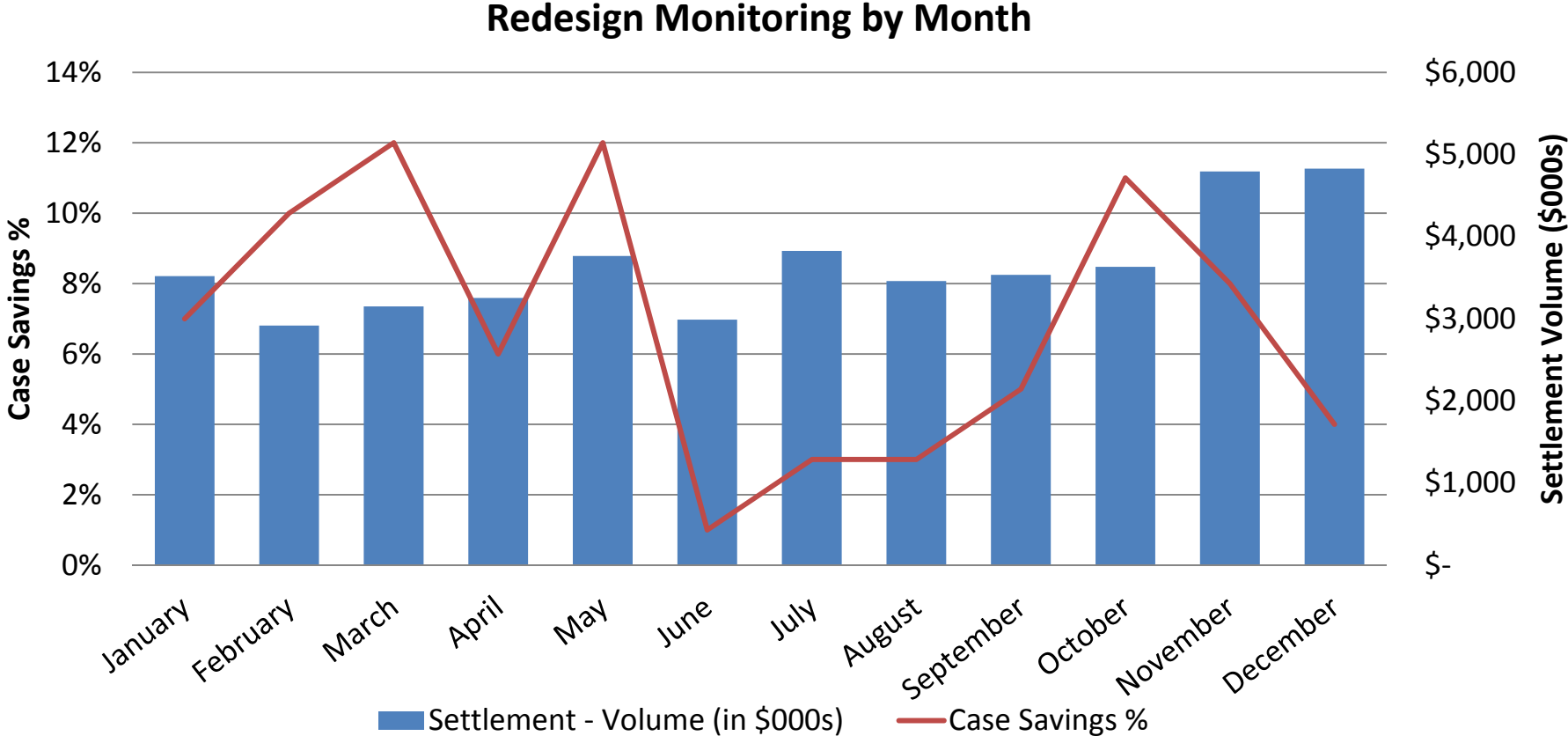


Actuarial Contribution

- Supporting the initial studies
- Identification of possible first tranches using data analysis
- Monitoring progress
- Evaluating Results
- Develop new tranches and retire ineffective tranches, based on results.
- Adjusting reserve analyses

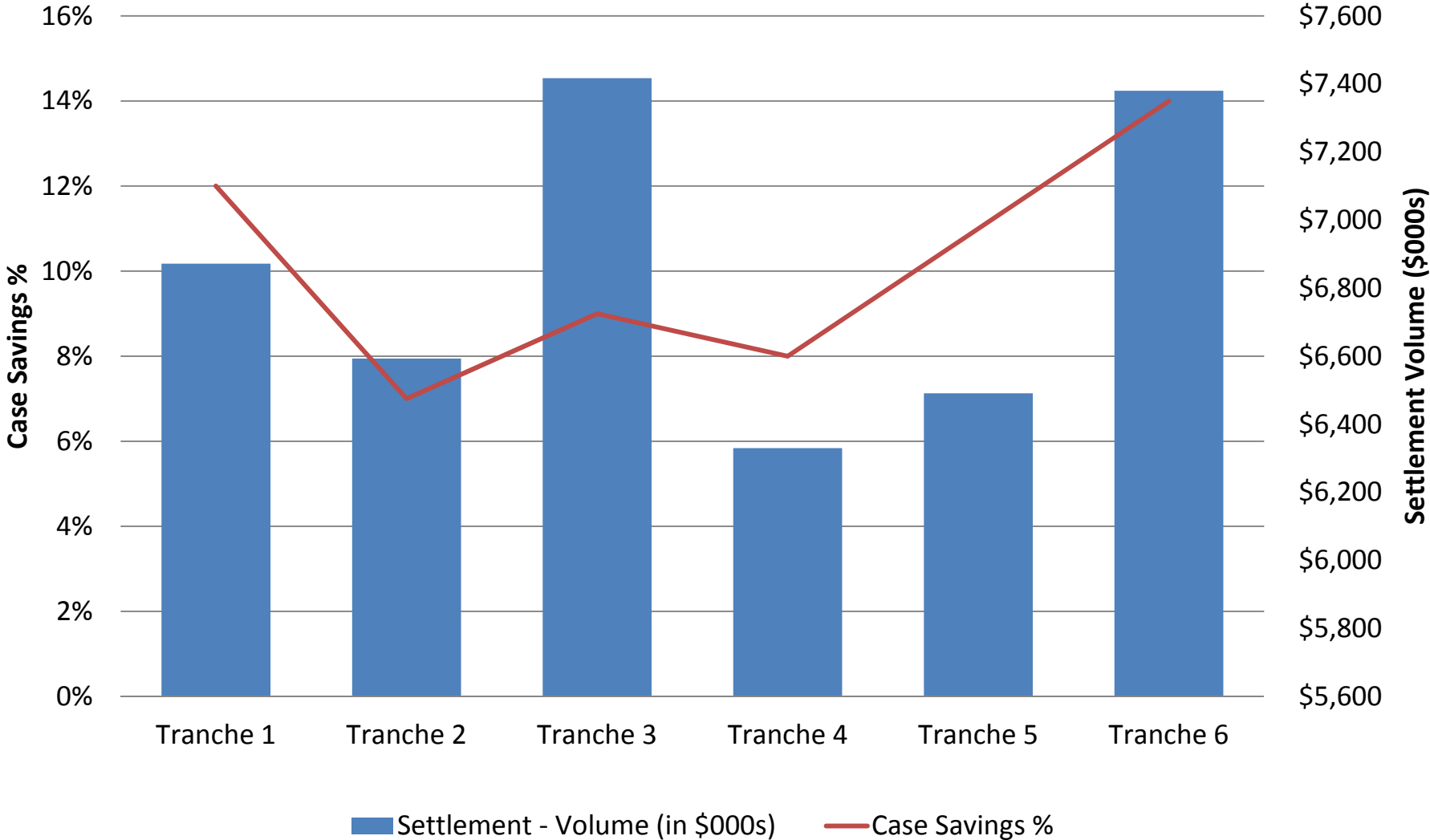
Monitoring & Analysis for Claims Department

From information gathered, periodic reporting is done to capture key metrics, such as volume of settlements, savings off reserves, and tranche effectiveness



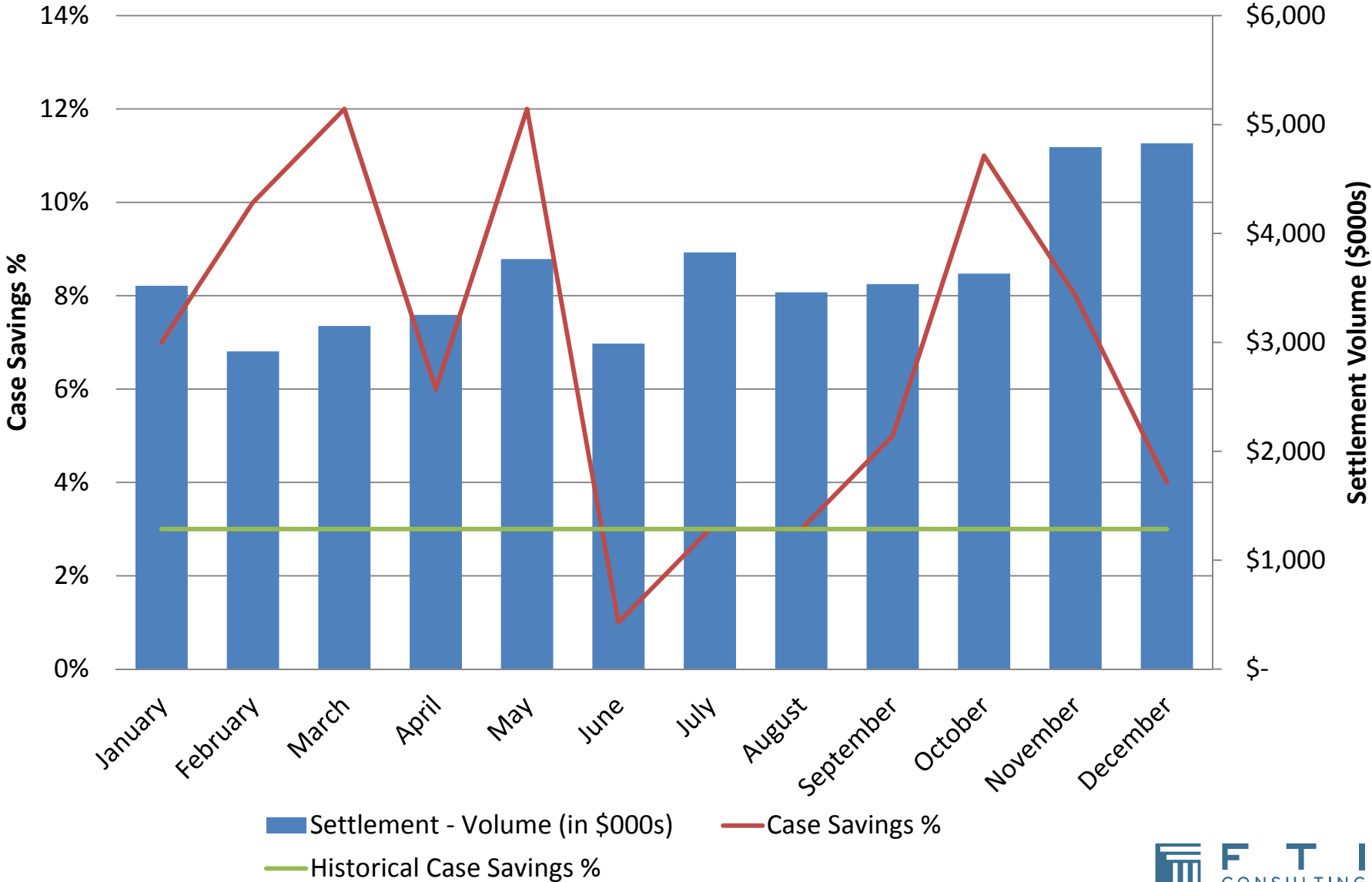
Monitoring & Analysis for Claims Department

Redesign Monitoring by Tranche



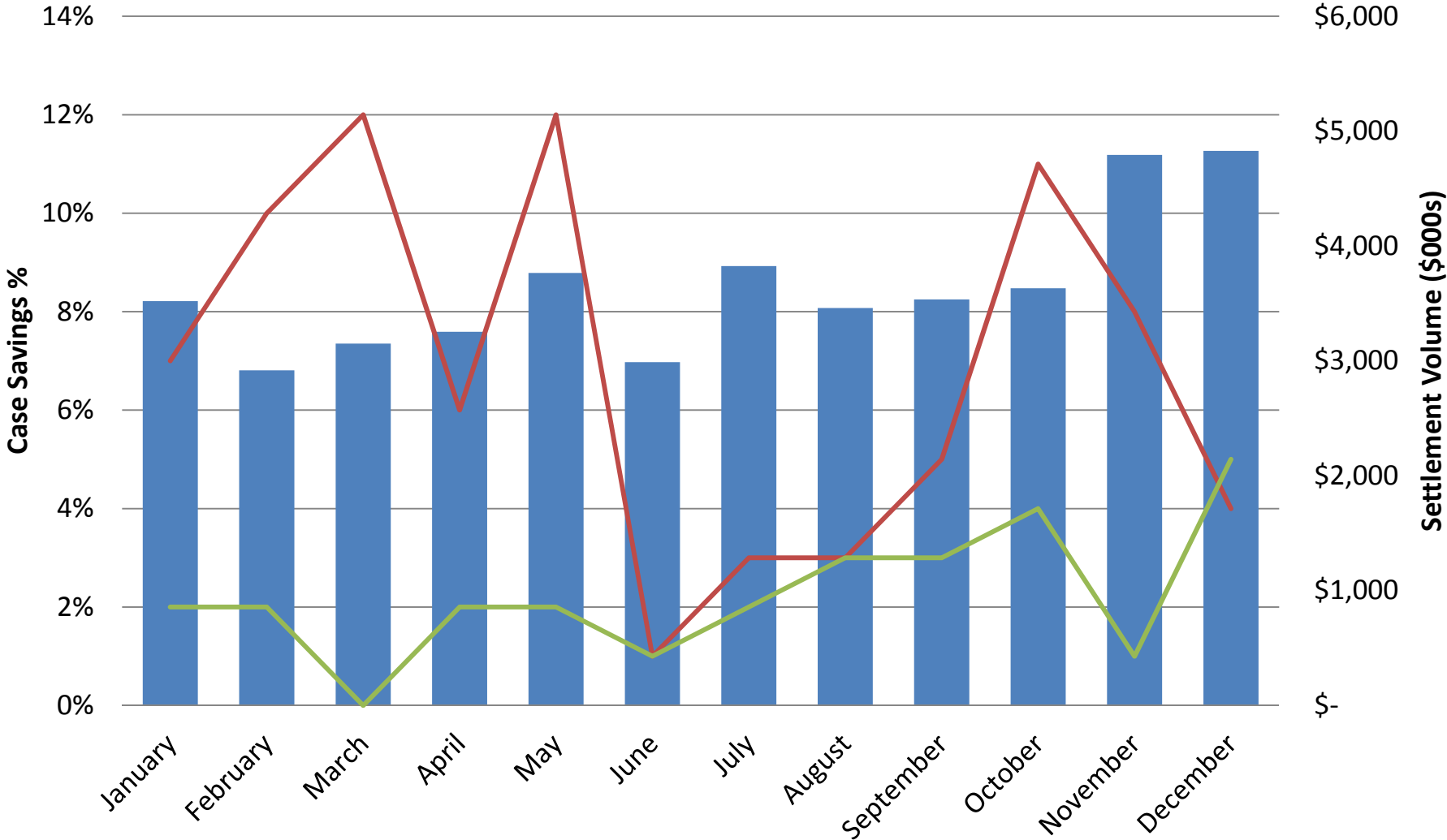
Monitoring & Analysis for Claims Department

Redesign Monitoring by Month



Monitoring & Analysis for Claims Department

Redesign Monitoring by Month



■ Settlement - Volume (in \$000s)
 — Case Savings %
 — Historical Case Savings %

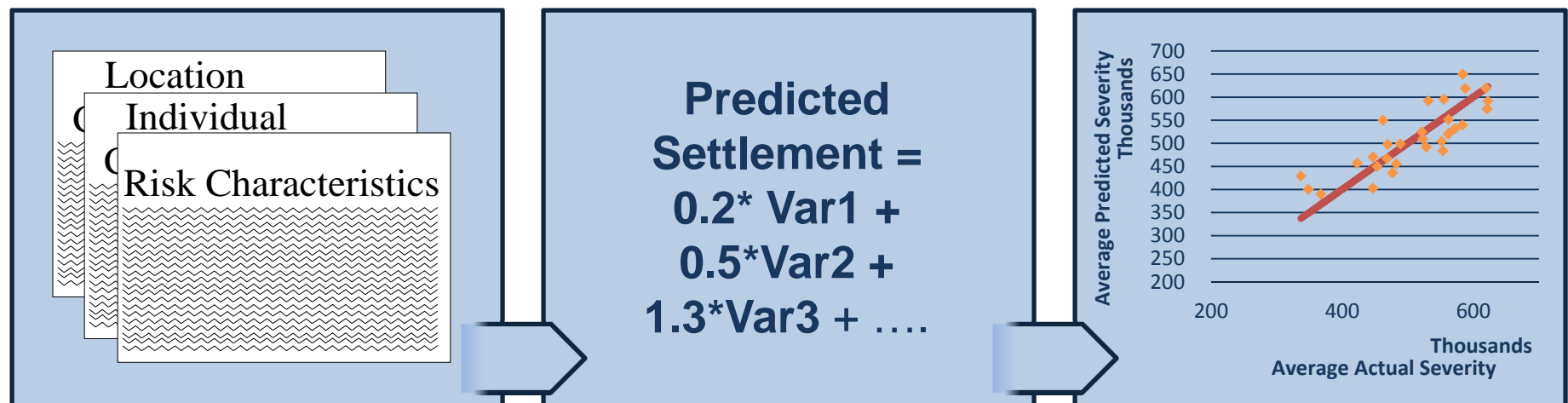


Monitoring & Analysis for Claims Department

- However, the claims identified in the tranche/scoring process may not have the same case savings potential as the average claim in the book of business
- Another valuable tool to use to assess the redesign effectiveness would be a generalized linear model (GLM)
- A GLM tool can pull together all relevant available claims information and predict the settlement value, based on how claims with similar characteristics have settled

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Monitoring & Analysis for Claims Department

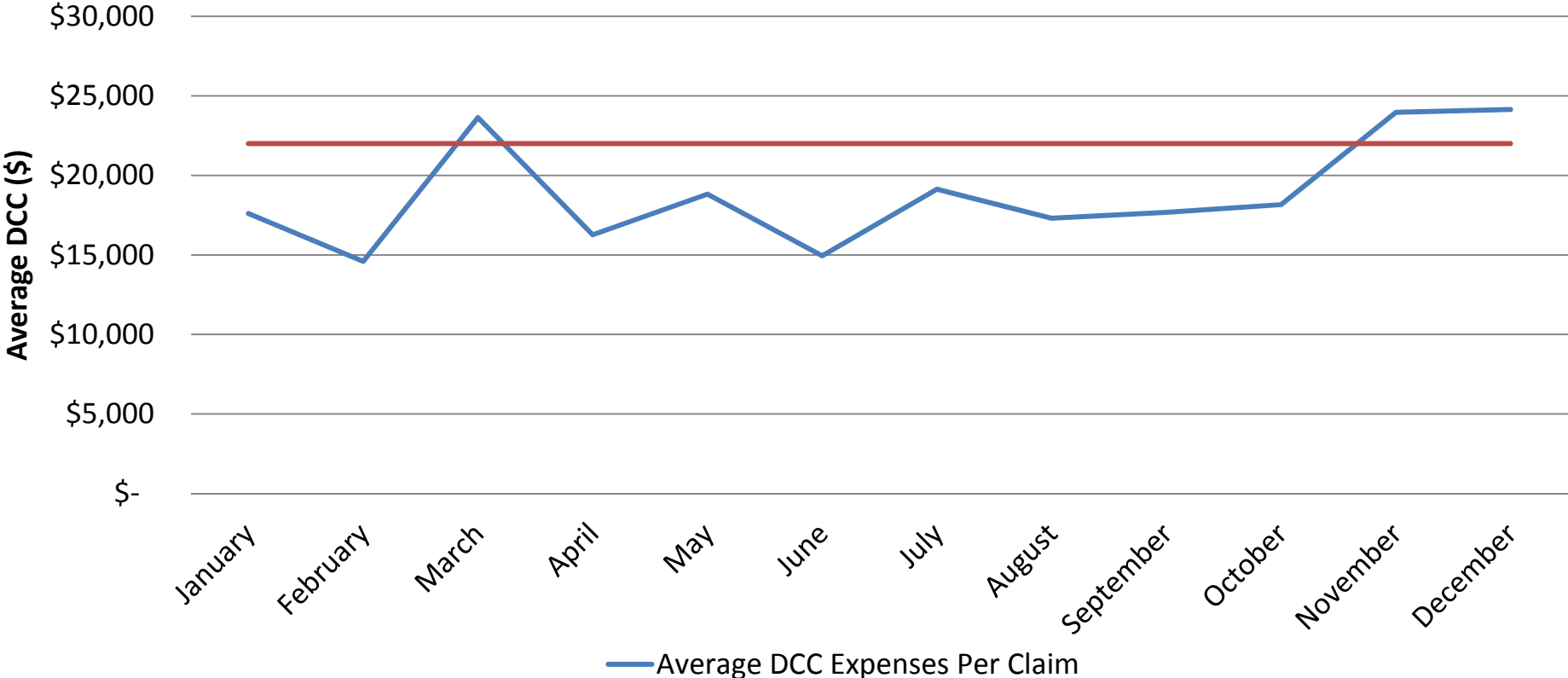
Redesign Monitoring by Month



Monitoring & Analysis for Claims Department

*DCC should be reduced as well, due to a faster claim settlement.
The average DCC can be monitored and compared against historic averages*

Redesign Monitoring - DCC Analysis



Impact of Claims Redesign on Reserving

These redesign efforts will have an impact on reserving, and can be accounted for in different ways during the life of the project:

After Leakage Study, Before Implementation

- Once the company has agreed to implement changes, the future favorable impact on reserves can be estimated from the leakage study and have an impact on the reserve estimates.

During Implementation

- As the company implements changes to the claims department, the results from monitoring can be used to determine whether the expected savings is being achieved.
- As the redesign efforts will impact development, adjustments can be made to account for these effects.

Questions?