Implications of Technology in Claim Operations

Insurance carriers have aggressively managed down operating and acquisition expenses, and technology has driven significant breakthroughs in underwriting sophistication. Could claim operations be the next frontier?

Casualty Loss Reserve Seminar
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Stepping into the Future

Industry Trends and Implications

Impact on the Claims Business

Technology Advances

Today's Agenda

I. **Competitive Environment**

II. **Traditional Approaches to Optimizing Claim Outcomes**

III. **Limitations of Traditional Approaches**

IV. **Opportunities Introduced by Claim Technology**

V. **Practical Examples of Competitive Advantage**

VI. **Exploring the New Frontier – Predictive Modeling**

VII. **Implications for Insurance Carriers**

Current Profitability Drivers

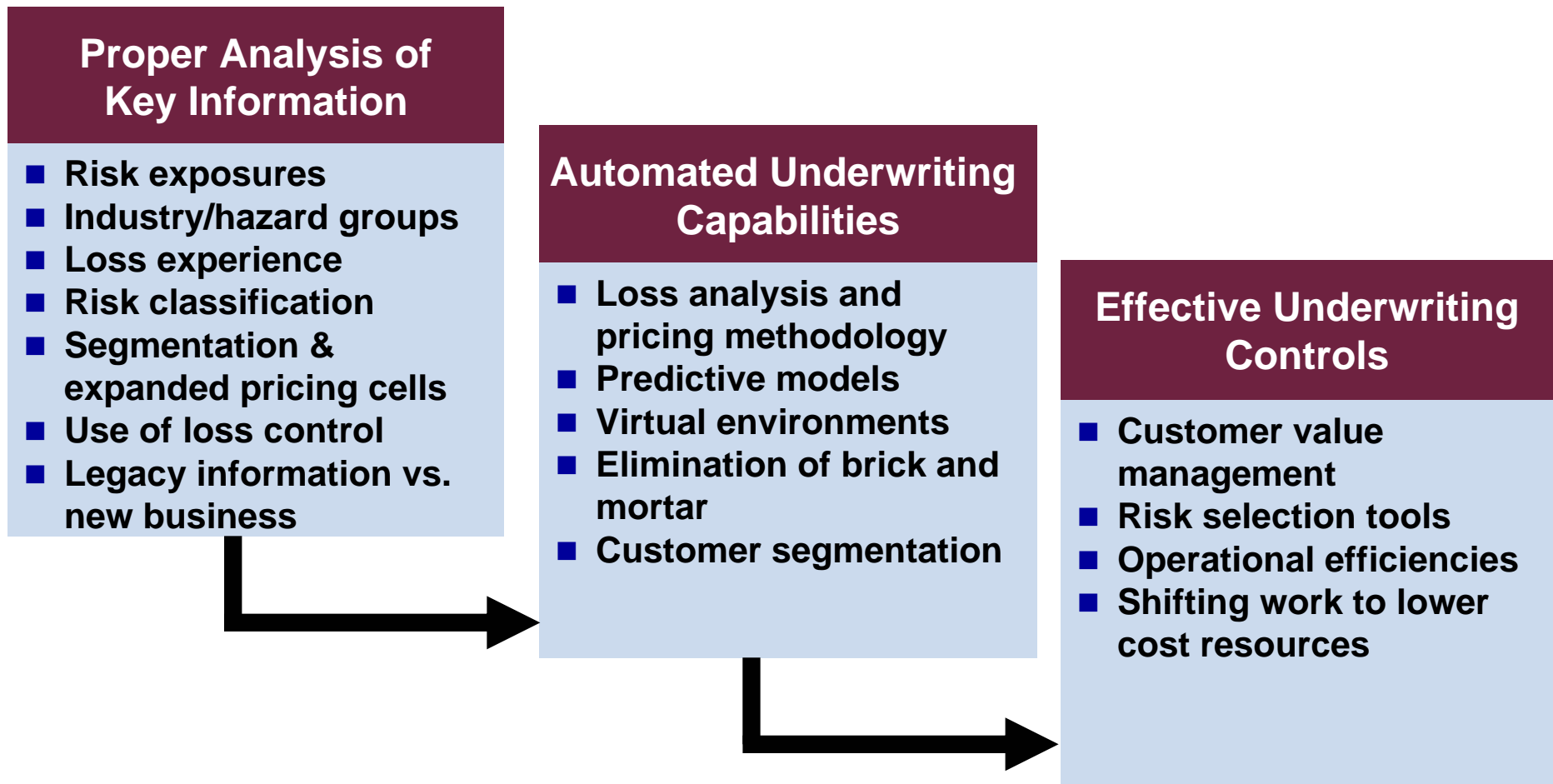| **Personal Lines**	■ Aggressive expense management ■ Tiering/segmentation drive pricing ■ Predictive models increasingly important ■ Customer retention/cross selling
Underwriting Profit	■ Low investment returns ■ Pricing softening ■ Aggressive competition
Loss/LAE	■ Sense of urgency/next frontier ■ Hard market generates loss cost growth ■ Improving frequency sustains profitability

# How technology enables profitability in underwriting

Proper Analysis of Key Information

- Risk exposures
- Industry/hazard groups
- Loss experience
- Risk classification
- Segmentation & expanded pricing cells
- Use of loss control
- Legacy information vs. new business

Automated Underwriting Capabilities

- Loss analysis and pricing methodology
- Predictive models
- Virtual environments
- Elimination of brick and mortar
- Customer segmentation

Effective Underwriting Controls

- Customer value management
- Risk selection tools
- Operational efficiencies
- Shifting work to lower cost resources

How technology drives success in modern sports
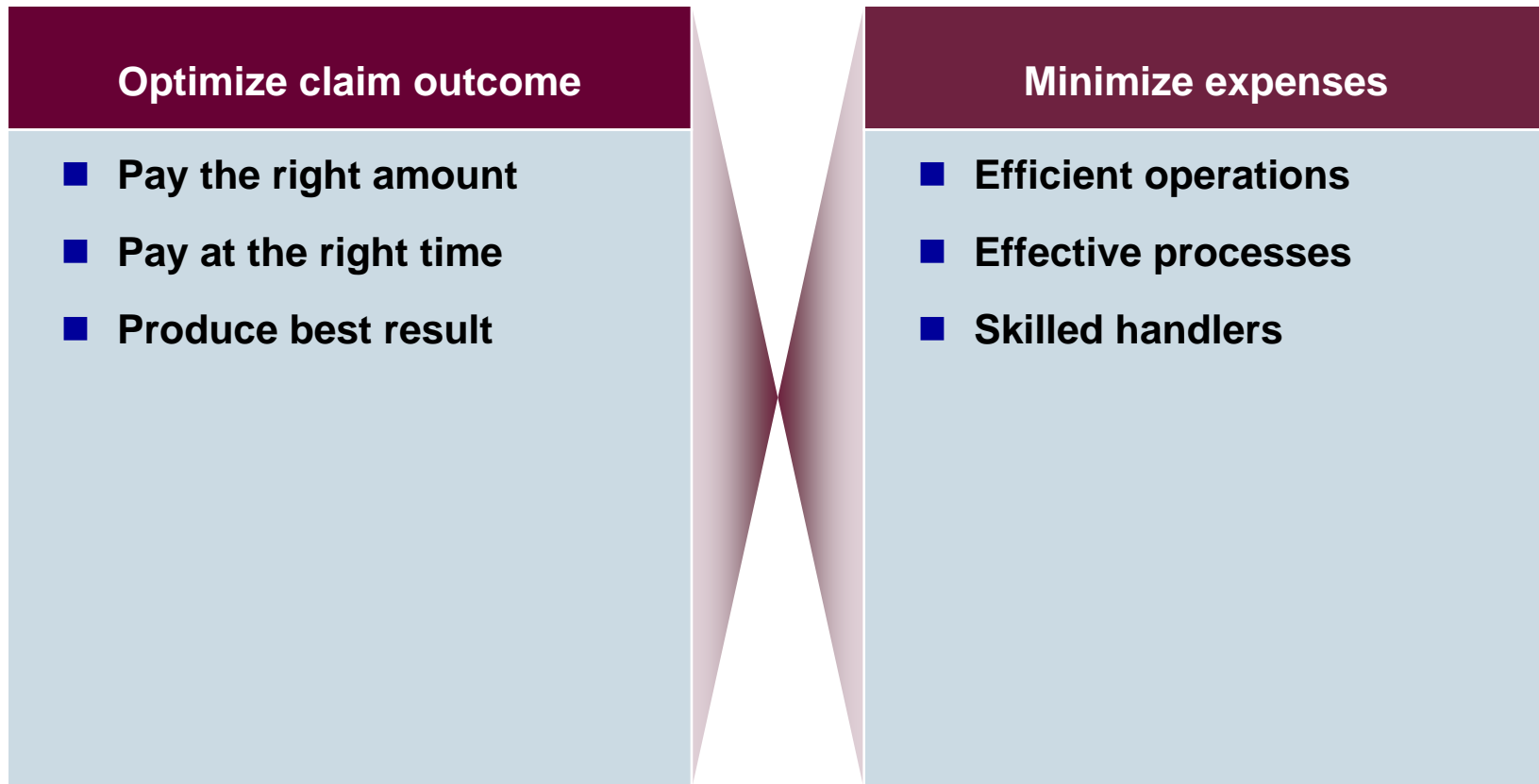
Beating the Competition

- **Technology Only**
  - **Tennis**
  - **Golf**

- **Technology & MIS & Strategy**
  - **Football (Patriots)**
  - **Baseball (Red Sox)**

- **Implications for Insurance and Claim Operations**
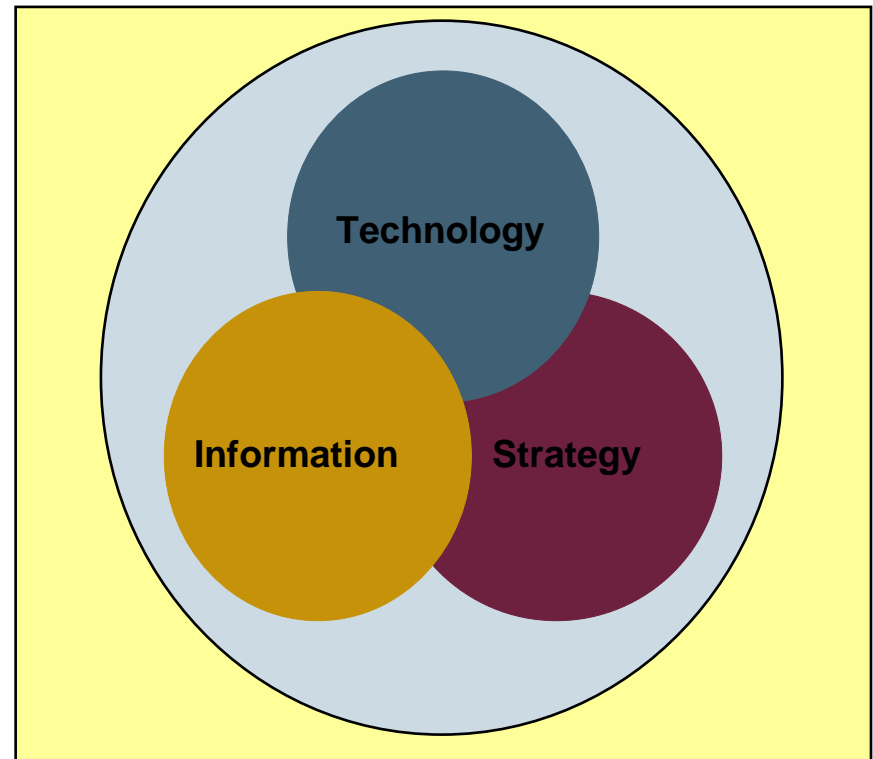
Claim Departments' goals have not changed over time

Primary goals for claim management are consistent and clear across carriers

Optimize claim outcome	Minimize expenses
■ **Pay the right amount**	■ **Efficient operations**
■ **Pay at the right time**	■ **Effective processes**
■ **Produce best result**	■ **Skilled handlers**

How goals are achieved may differ but carriers share common themes

Supporting the Vision — Outcomes

Customer Satisfaction

- Be recognized as the industry leader in customer service, evidenced by consistently superior customer satisfaction ratings

Financial Discipline

- Protect company's financial assets; offer fair payment of claims at low expense
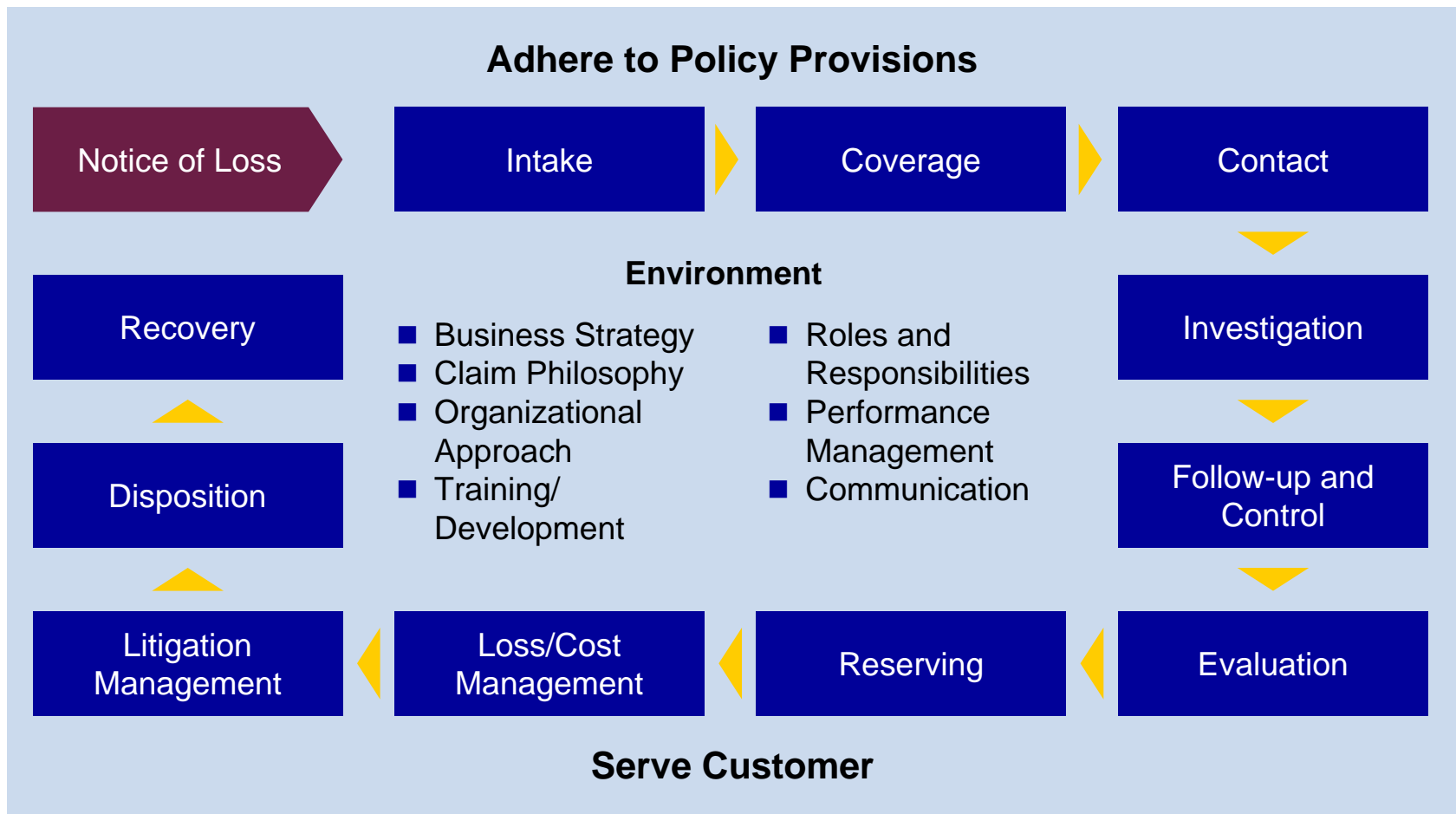- Support pricing and reserving accuracy; support underwriting in evaluating quality of book

Employee Satisfaction

- Build and sustain an engaged, high-performance claims staff with attractive career opportunities and competitive compensation

Understanding claim management effectiveness is critical to success

Claim handling is an integrated process driven by business goals

Adhere to Policy Provisions

Notice of Loss → Intake → Coverage → Contact

Recovery | Investigation

Disposition | Follow-up and Control

Litigation Management ← Loss/Cost Management ← Reserving ← Evaluation

Environment

- Business Strategy
- Claim Philosophy
- Organizational Approach
- Training/ Development

- Roles and Responsibilities
- Performance Management
- Communication

Serve Customer

Preparing the claim department is key to improving claims profitability

■ **As technology advances, the role(s) of claims personnel will have shifted from historical challenges and competencies to a new set of competencies**

Today's/Tomorrow's Challenges	Today's/Tomorrow's Competencies
■ Improve customer satisfaction	■ Customer value management
■ Avoid overpayments, keep LAE down	■ Goal orientation (focus on a balanced array of measures)
■ Merge claim skills with the "right" performance metrics	■ Teamwork and coordination of multiple parties
■ Keep fraud to a minimum	■ Process management
■ Team with others in approach to customers (underwriting, actuarial, loss control, marketing)	■ Staff competency development, investigative skills
■ Employ best capabilities	■ Integrated inference models, expert systems and evaluation tools
■ In-house	■ Automation of simple processes
■ Outside partners	■ Best in class claim MIS/operational metrics
■ Exploit technology, data mining	■ Business acumen
■ Stay ahead of the competition	■ Profitable applications in claims and underwriting

Components of successful claim operations

Characteristics	Evidenced By
■ **Well-trained front line claim handlers**	■ **In depth investigations with objective, provable findings** ■ **Quality referrals to SIU, subrogation, etc.**
■ **Lean organizational structure**	■ **Efficient and effective operations**
■ **Effective Fraud Tools**	■ **Easily identifiable red flags, early recognition/action taken, fraud hotlines**
■ **Technology Support**	■ **Embedded systems, data mining, vendor partnerships/software**
■ **Active Industry Participation**	■ **Industry memberships, involvement; speeches, publications**

■ **Partnerships**
   ■ **Agents, underwriting, claims, law enforcement agencies (state and federal)**
	■ **Ongoing communications**
	   ■ **Information exchange**
	■ **Aggressive prosecution**

■ **Meaningful Performance Metrics**	■ **Exploit technology**
	   ■ **Internal benchmarks**
	   ■ **Industry data**

Historically, companies have focused on key indicators

Claim Department Key Performance Indicators

| Identify strategic objectives | Select key success indicators | Determine measurement criteria |
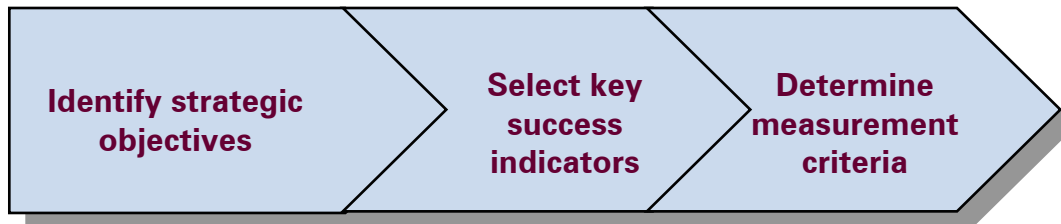
Performance Metrics that establish your Baseline

| Develop measurement methodology | Identify current performance levels | Establish performance baseline |

Comprehensive Quality Assurance Process

| Design performance evaluation process | Establish goals and milestones | Monitor progress | Communicate Results | Revise targets as needed |
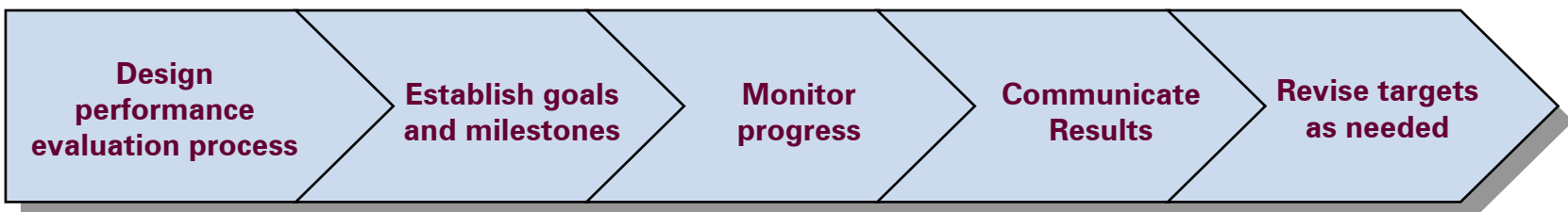
And relied heavily on manual, labor-intensive tools and data gathering to measure success

Traditional claim QA process relies heavily on individual claim files audited for quality and regularly reviewed by supervisors and managers.

Traditional claim oversight

- **Claim file reviews**

  - **Share best practices**

  - **Identify training needs**

  - **Identify process gaps**

  - **Examine claim outcomes**

  - **Develop scorecard measures**

  - **Implement change initiatives**

  - **Lagging indicator**

While historically successful, there are limitations of traditional approaches to optimizing claim outcomes

- **File reviews tend to be broad in scope, and it can be difficult to identify patterns of underperformance and develop fixes.**

- **Significant periods of time can elapse between the times performance issues arise and when they are detected through file reviews, which tend to be lagging indicators.**

- **Generalizing from limited and subjective samples can be misleading at times, and linking file reviews to performance management may create unintended inequities.**

- **Internally focused claim benchmarking is frequently ineffective in sustaining desired improvements in claim handling and does not provide enough context for what is possible and the resulting financial implications.**

- **Manual oversight is labor intensive and thus expensive, suggesting the opportunity for enhancing operational efficiency.**

- **File review approaches do not translate readily into meaningful feedback for pricing, reserving, or underwriting.**

As with competitive sports, technology allows better execution

Traditional approaches provide the building blocks

- **First and foremost – keep what is working!**

- **File reviews critical and central to quality assurance**
    - **Identify training needs**
    - **Hands-on evaluation of performance**
    - **Slippage in fundamentals of claim handling cannot be reversed through alternative measures**

- **But is traditional file review and human oversight enough? Can data and technology arm management with better insight and information around performance and outcomes?**
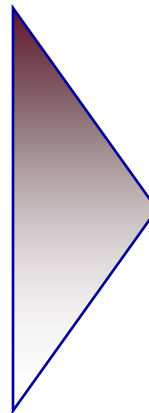
Operational metrics improves the roadmap

Sophisticated claim organizations are now seeking enhancements to strengthen and leverage the traditional file review and human oversight.

Traditional claim oversight	Integration of operational metrics
■ **Share best practices** ■ **Identify training needs** ■ **Identify process gaps** ■ **Examine claim outcomes** ■ **Develop scorecard measures** ■ **Implement change initiatives** ■ **Lagging indicator**	■ **Establish operational performance measures** ■ **Identify areas of opportunity relative to performance targets** ■ **Enables more sophisticated analysis to pinpoint drivers of poor performance** ■ **Identifies key cost drivers** ■ **Enables sustained performance improvements** ■ **Leading indicator**

The power of claims technology allows greater depth and application

- **Financial Data – External Focus**
  - **Transactions with dollars attached feed to pricing and underwriting systems**
  - **Actuaries and accounts aggregate data for loss cost and expense booking and forecasting**
  - **Claim operations focus on calendar year severities and claim closure patterns**

- **Operational Data – Internal Focus**
  - **Claim data used for staffing and workload management**
  - **Tracking of inventories and average claim cycle times**
  - **Vendor expense management**
  - **Benchmarking of officer performance**

Next frontier claim technology enables detailed data capture and derivation of claim operational metrics

- **What is an Operational Metric?**
  - **Non-financial metric**
  - **Leading indicator of claim outcomes**
  - **Frequently tied to initiatives and opportunities**
  - **Internally relevant to claim operations**
  - **Historically not captured electronically or quantified as MIS**

- **Examples of Operational Metrics**
  - **Estimator source mix**
  - **Estimator source leakage**
  - **Cycle time distribution**
  - **Application of comparative negligence**
  - **Staff counsel penetration**
  - **Legal bill review savings**

Integration of operational metrics addresses the limitations of traditional file reviews

- **Operational metrics can be refined to pinpoint root causes of inferior outcomes, saving significant time and energy and creating operational efficiencies around problem resolution through early identification and analysis.**

- **Many operational metrics represent strong leading indicators of claim operational and financial performance.**

- **Operational metrics can be implemented as field performance targets and/or incentives that may be more objective than historical calendar year severity measures, better aligning incentives with desired outcomes.**

- **Once opportunities have been identified and change initiatives or process revisions have been implemented, operational metrics can provide clean and direct information on whether the initiatives are working, and support sustaining the gains targeted by the change initiatives.**

Integration of operational metrics
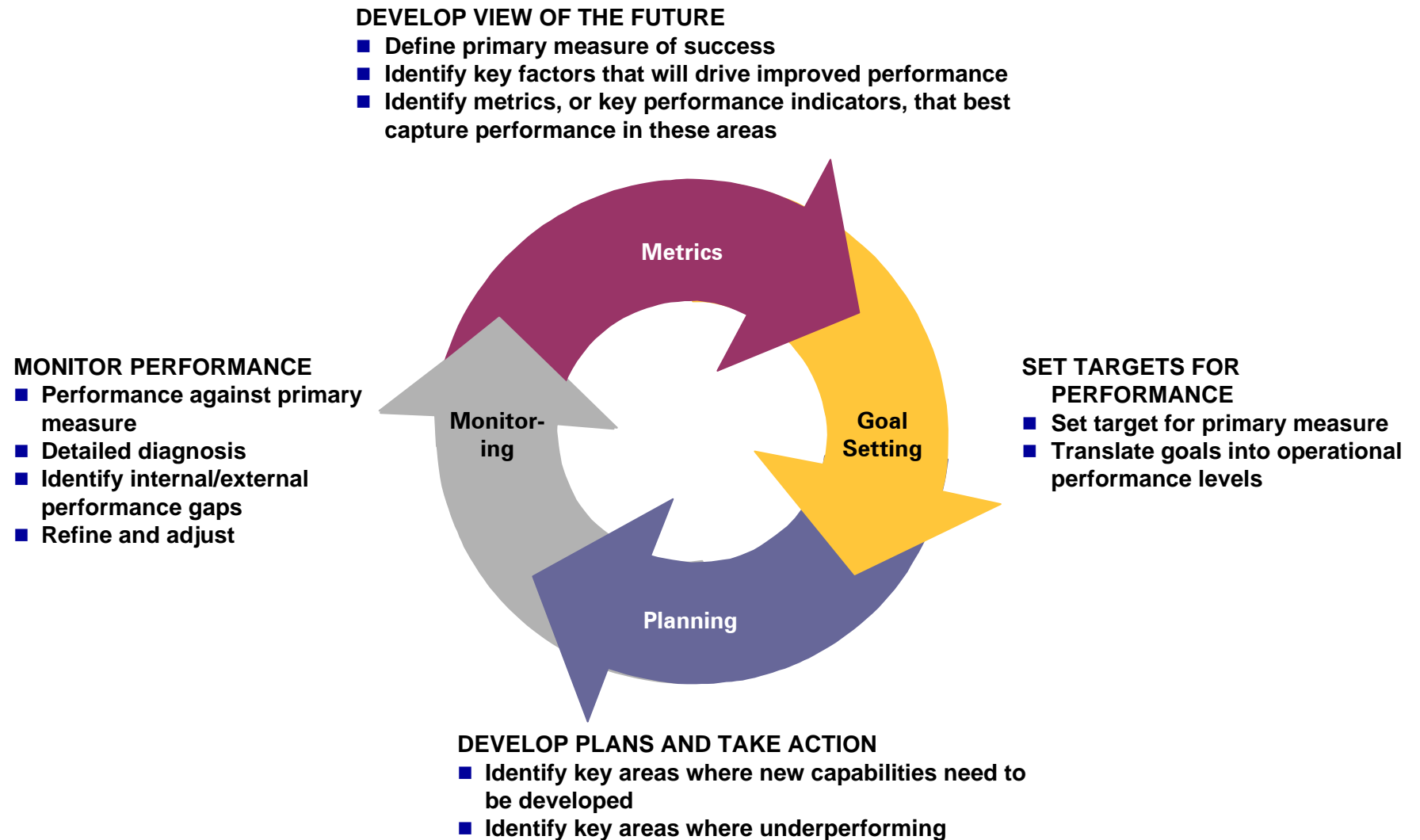## addresses the limitations of traditional file reviews

- **Trends may highlight areas of underperformance to focus on in subsequent file reviews, or identify areas of strength (handlers/units/lines of business/aspects of claim handling) that can be deemphasized in the short term.**

- **In some specific cases operational metrics can even be used to move to management by exception under the philosophy that outcomes will trend favorably if all key performance indicators are trending favorably.**

- **Technology can enable integration of underwriting and business dimensions into the claim MIS, providing new insights beyond those specific to claim operations.**

The adept use of technology creates the next-generation scorecard

The New Claim Scorecard – Illustrative Examples				
Claim Performance Indicator	**Traditional Measure**	**Issues and Limitations**	**Enhanced/Detailed Operational Metrics**	**Benefits of Enhanced Metrics**
Outcomes	Calendar year severity change	■ Subject to extraneous distortions ■ Cannot isolate internal vs. external drivers ■ Difficult to translate into action ■ Hindsight review	Accident year severity change by size of loss	■ Allows isolation of areas of underperformance or excellence ■ Eliminates extraneous influence ■ Broader scope – big picture ■ Clearer focus facilitates action
Outcomes	QA Reviews	■ Normally broad but not deep ■ Draw on small fraction of files ■ Expensive	Aggregate comparative negligence performance	■ Enables aggregate analysis ■ Based upon known cost drivers ■ Splits CN frequency/severity
Speed	Claim Closure Ratio	■ Impacted by variable intake ■ Measure counts vs. results ■ Difficult to translate into action ■ Root causes unidentified	Accident year disposal ratios by size of loss	■ Actionable information ■ Pinpoints drivers of overall results ■ Accident year allows adjustments for timing and mix by age
Speed	Average Cycle Time	■ Outliers distort averages ■ Assumes uniform closure practices	Cycle time distributions with key milestone detail available	■ Ability to size opportunities and evaluate initiatives ■ Can sterilize for practice changes
Efficiency	Calendar Year ALAE vs. Budget or Losses	■ Subject to budget anomalies ■ Mix of heterogeneous costs (independent adjuster, legal, other) ■ Provides little insight ■ Internally focused	Detailed ALAE by number of units purchased and cost per unit	■ Highlights cost drivers and areas of over-utilization ■ Can isolate heterogeneous costs ■ Facilitates actionable analyses
Financial Outcomes	Number of fraud or subrogation referrals	■ Subject to quality anomalies ■ Unrelated to results ■ Provides little insight	Fraud or subrogation predictive models	■ Uniform application of available information maximizes returns ■ Models highlight opportunities

And sustains continuing improvement

DEVELOP VIEW OF THE FUTURE
- Define primary measure of success
- Identify key factors that will drive improved performance
- Identify metrics, or key performance indicators, that best capture performance in these areas

MONITOR PERFORMANCE
- Performance against primary measure
- Detailed diagnosis
- Identify internal/external performance gaps
- Refine and adjust

SET TARGETS FOR PERFORMANCE
- Set target for primary measure
- Translate goals into operational performance levels

Metrics

Monitor-ing

Goal Setting

Planning

DEVELOP PLANS AND TAKE ACTION
- Identify key areas where new capabilities need to be developed
- Identify key areas where underperforming

Scenario 1 – Liability severity analysis

Scenario 1

Liability severity is trending above industry levels despite no significant changes in the underlying book of business or geographic mix. Operational metrics demonstrate that settlements against cost estimator claim valuations are deteriorating, and simultaneously the average comparative negligence assessed on claims is slipping.

Competitive Advantage Using Operational Metrics

Drilling into the data determines that the frequency with which comparative negligence is applied has deteriorated. Given this information, the quality organization conducts a focused file review and determines that inexperienced handlers are the culprits, and they are uncomfortable and ill-trained to handle difficult negotiations. Following training on fact-based negotiation and the introduction of experienced mentors to supplement supervisory oversight, new comparative negligence operational metrics validate that application has improved as expected and the adverse severity trends ameliorate. Actuaries are notified of the temporal blip in performance, and the anomaly is not trended and developed to artificially inflate future price and reserve indications.

Scenario 2 – Metrics link poor performance to network penetration

Scenario 2

Medical cost inflation spirals upward in a Workers Compensation field claim office. The early feedback is that the jurisdiction/environment has deteriorated and the adverse cost trends are unavoidable. Operational metrics suggest otherwise. They highlight that network penetration has been slipping, and concurrently the savings recognized through bill reviews have been holding steady.

Competitive Advantage Using Operational Metrics

Detailed investigation determines that the geographic mix of business within the state has changed significantly following the acquisition of a new book of business, and the network is insufficient to handle these new concentrations of exposure. Claim operations respond by first ramping up the bill reviews, which should yield greater savings with more business out of network in the short run, and work with the network provider to grow the network to better handle the new concentrations of business and increase network penetration. In this case the operational metrics actually serve to identify not a claim operational root cause, but an underwriting issue that has manifested as deteriorating claim performance.

Scenario 3 – Discovering the root cause of growing auto claim inventory

Scenario 3

Following the rollout of a new claim system, automobile physical damage cycle times deteriorate and handler inventories begin to grow. Operational metrics highlight the trends quickly, and indicate that the inventories are growing exponentially. This triggers investigation and subsequent intervention in the new claim system and its required workflows where traditional methods determine that the new system has introduced substantial non-value added work into the claim handling process

Competitive Advantage Using Operational Metrics

The resolution produces efficiencies beyond what were in place with the old system and ultimately reduces cycle times, and by extension claim inventories. Additionally it increases customer satisfaction while reducing expense and eliminating non-value added work. A potential catastrophe becomes a major victory for the claim department as early identification enables early intervention and swift resolution.

Scenario 4 – Impact of new legislation

Scenario 4

Sweeping workers compensation reforms go into effect in a major state. Rates are correspondingly reduced where savings can be objectively quantified to reflect tighter recovery guidelines and fee schedules. However, many key aspects of the reforms are more subjective and remain unquantified.

Competitive Advantage Using Operational Metrics

Claim operational MIS tracks cycle times and success rates for administrative hearings and extremely favorable trends begin to emerge. The pricing actuaries are notified, and they quantify double digit rate redundancies based upon the new information on the subjective reforms coming out of claims. Underwriting guidelines are relaxed and a period of significant profitable growth ensues as market share climbs rapidly given this information advantage.

Predictive modeling - a key business decision-making tool based on large amounts of electronic information

- **What is predictive modeling?**
  - **It is the use of statistical and computational techniques**
    to extract knowledge from large amounts of information (data)
    in order to make better business decisions

- **Why use it?**
  - **Computers now record enormous amounts of data, much more than can be analyzed by simple reports, such as those used for decades to determine surcharges, discounts, underwriting guidelines, referral of claims to an SIU, etc.**
  - **Predictive modeling finds this information that is missed in simple reports, and turns it into profitable decision rules**

- **Why is predictive modeling important now, if one didn't need it in the past?**
  - **The large amounts of data available now allow competitors to leverage knowledge from predictive modeling in their decision-making**
  - **They gain a comparative advantage over competitors who don't use it**

Predictive modeling - a key business decision-making tool based on large amounts of electronic information

- Predictive modeling can increase the value of your customers

- Profitable applications of predictive models include:
  - Rating business more accurately and more profitably, using more information
  - Underwriting and tiering business more effectively
  - Targeting new business and cross-selling solicitations more efficiently
  - Identifying the customers and prospects most valuable to the company
  - Detecting claims likely to be fraudulent or exaggerated
  - Detecting claims that require special handling
  - Improving experience rating
  - Customer value management

Exploring the next frontier – predictive modeling applications for claim

- **Initial Claim Handling Triage**
  - **Combine claim, claimant, and policyholder characteristics**
  - **Categorize claims based upon modeled severity and/or complexity**
  - **Assign handler and unit based upon claim characteristics**
  - **Practical applications – liability, workers compensation, total loss**

- **Claim Valuation Models**
  - **Based upon claim and claimant characteristics later in claim life cycle**
  - **Existing vendor applications for liability and workers compensation**
  - **Provides value for case reserving and actuarial reserving**
  - **Can facilitate benchmarking of handler and office performance**
  - **Can be tailored for total loss salvage, subrogation, litigation decision support**

- **Fraud Detection and Response Models**
  - **Based upon claim and claimant characteristics**
  - **Flag claims for referral to SIU**
  - **Data mining for organized (attorney and/or provider) fraud**
  - **Models can link disparate characteristics into predictive patterns**

Increasingly, predictive modeling drives success by turning information into customer knowledge ...

Information Acquisition Strategy

Knowledge Management

Customer Value Management

Vendor Supplied Information
- Credit/Financial
- Construction/Building Age
- Purchasing/Lifestyle

- Company Supplied
- Information
- Claim History
- Longevity

- Customer Supplied
- Information
- Specific Location
- Other Attributes

Inference Modeling to Determine Revenue, Cost and Value Drivers

Strategies
- Product
- Underwriting
- Pricing Sophistication
- Territorial Definition
- Claim Handling
- Technology Savvy
- Segmentation
- Channel

... and ultimately into strategies that maximize value

Implications for insurance carriers – applications of operational metrics

- **Sustaining existing quality and execution**

- **Claim triage**

- **Fraud identification and analysis**

- **Specialized claim handling**

- **Inventory management**

- **Interactions with business managers/actuarial/underwriters**

Implications for insurance carriers – advantages of operational metrics

- **Reduction of claim leakage**

- **Tracking of unintended consequences**

- **Prioritizations of savings opportunities**

- **Maximizing initiative performance**

- **Sustaining performance improvements**

- **Optimizing expense investments in claim outcomes**

Strategy to Results...Operational Metrics Implications

Strategy/ Philosophy — Strategy/philosophy clearly defined, documented and shared across the organization and with core constituents

Operating Model — Intended "experiences" of different constituents and the broad operational approaches necessary for successful execution

Organizational Capabilities — Capabilities and skills needed to fulfill the strategy/ philosophy and operating model (distinguishing vital from routine)

Cost-effective deployment of people, structure, information, process, technology, culture and leadership to achieve success — **Execution**

Performance metrics, analytics and reporting to support management — **Performance Measurement**

Results

Long- and short-term stakeholder satisfaction