ADM Vendor Management

Managing application services outcomes for the Digital business

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CAST Confidential

You Get What You Pay For

$25

Hourly rate card of your outsourced developers

75%

Of developers at your vendor has less than 3 years experience

10x

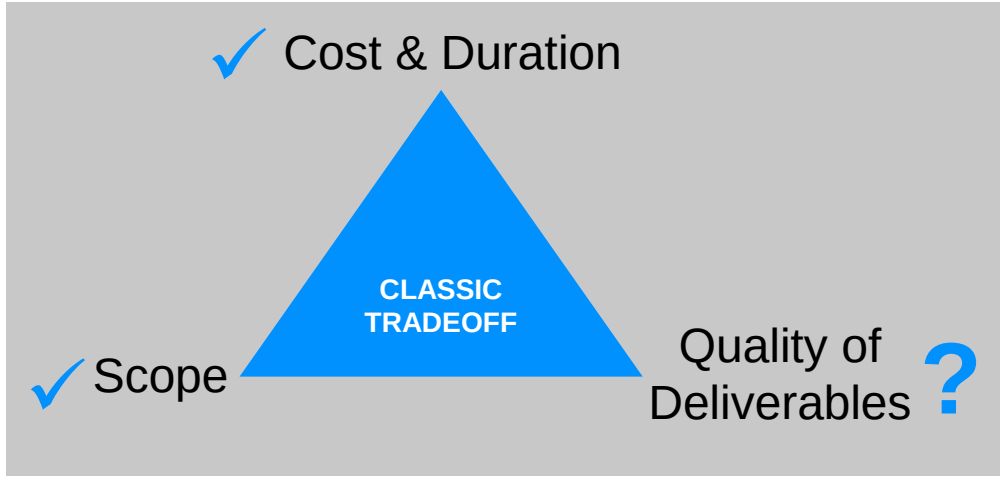
Difference between experienced and novice developer

?

Is that the right balance between **cost**, **agility**, and **risk** to your software-driven business?

Sources: *The Economics of Software Quality*, Jones, Bonsignour; CAST Research Labs;

Many IT Units Lack a 360° View on Outsourced ADM



"When CIOs … don't have the right management dashboard or other monitoring tools, it undermines their ability to manage service quality, support innovation, and control vendor costs and risks."

Michael Stoler, Senior Manager
Deloitte Consulting LLP

74% of organizations do not currently have adequate tools and processes to manage their vendor portfolios. Deloitte.

OUTCOME-BASED CONTRACTS ARE GROWING RAPIDLY

1 in 2 are shifting to outcome-based contracts

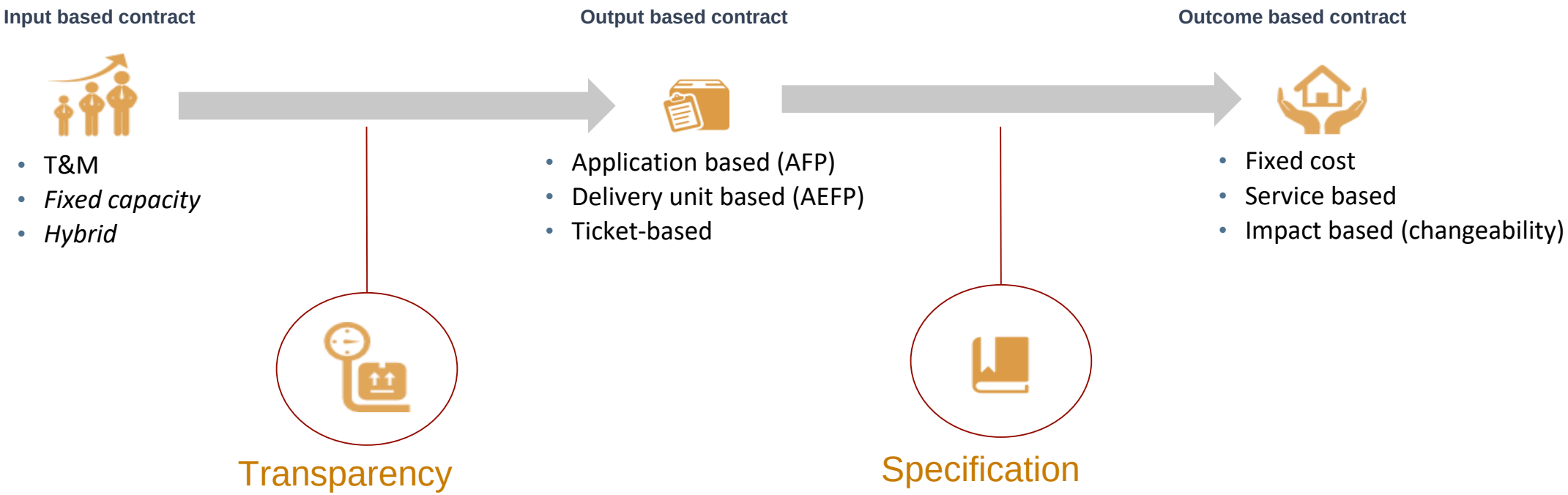
57% of CIOs & CTOs find outcome based contracts most effective

Survey by Forbes INSIGHTS

Sources: *Deloitte 2014 Global Outsourcing and Insourcing Survey, Forbes Insights*

Establish ADM Measurement Process

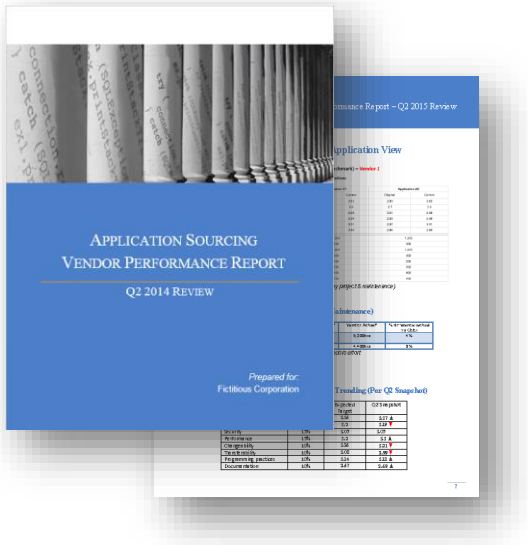
Provide visibility to management, manage risk, quality and throughput through advanced software analytics



Integrating Quality Metrics in 4 Steps

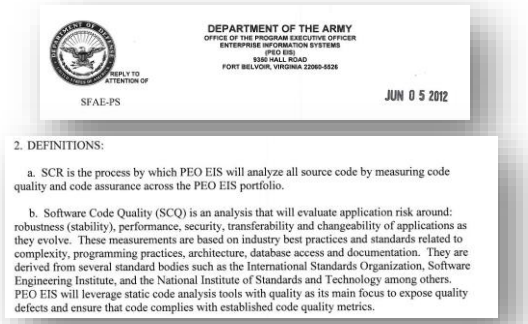
- Four basic patterns of structural metrics in Vendor Management

1 Scorecards



Measurement and discussion in governance committees goes a long way to setting behavior if given enough attention

2 Policy



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2. DEFINITIONS:

a. SCR is the process by which PEO EIS will analyze all source code by measuring code quality and code assurance across the PEO EIS portfolio.

b. Software Code Quality (SCQ) is an analysis that will evaluate application risk around: robustness (stability), performance, security, transferability and changeability of applications as they evolve. These measurements are based on industry best practices and standards related to complexity, programming practices, architecture, database access and documentation. They are derived from several standard bodies such as the International Standards Organization, Software Engineering Institute, and the National Institute of Standards and Technology among others. PEO EIS will leverage static code analysis tools with quality as its main focus to expose quality defects and ensure that code complies with established code quality metrics.

Ask vendors to provide specified metrics on their own (e.g., provide CISQ scores/certificate for each release) which tends to be unreliable and somewhat inconsistent

3 SLAs

Application Name	Tier 1 Metrics (Critical Service Levels)	At Risk Multiplier	Risk Allocation	At Risk Amount
OMS			30%	
	Total Quality Index	50%		$15,000
	Critical Violations	30%		$9,000
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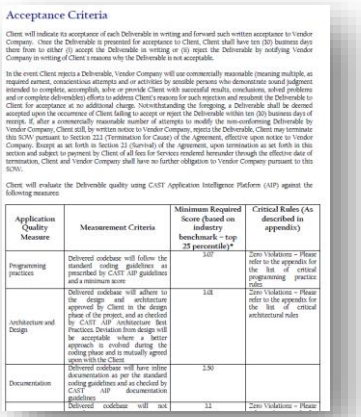
Treat software enhancements and maintenance as a service; track levels, penalties, credits but extended through CAST to cover operational and maintenance metrics

4 Acceptance Criteria



Acceptance Criteria

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In the event Client rejects a Deliverable, Vendor Company will use commercially reasonable (meaning multiple, as required earnest, conscientious attempts and or activities by sensible persons who demonstrate sound judgment intended to complete, accomplish, solve or provide Client with successful results, conclusions, solved problems and or complete deliverables) efforts to address Client's reasons for such rejection and resubmit the Deliverable to Client for acceptance at no additional charge. Notwithstanding the foregoing, a Deliverable shall be deemed accepted upon the occurrence of Client failing to accept or reject the Deliverable within ten (10) business days of receipt. If, after a commercially reasonable number of attempts to modify the non-conforming Deliverable by Vendor Company, Client still, by written notice to Vendor Company, rejects the Deliverable, Client may terminate this SOW pursuant to Section 22.1 (Termination for Cause) of the Agreement, effective upon notice to Vendor Company. Except as set forth in Section 23 (Survival) of the Agreement, upon termination as set forth in this section and subject to payment by Client of all fees for Services rendered hereunder through the effective date of termination, Client and Vendor Company shall have no further obligation to Vendor Company pursuant to this SOW.

Client will evaluate the Deliverable quality using CAST Application Intelligence Platform (AIP) against the following measures:

Application Quality Measure	Measurement Criteria	Minimum Required Score (based on industry benchmark – top 25 percentile)*	Critical Rules (As described in appendix)
Programming practices	Delivered codebase will follow the standard coding guidelines as prescribed by CAST AIP guidelines and a minimum score	3.07	Zero Violations – Please refer to the appendix for the list of critical programming practice rules
Architecture and Design	Delivered codebase will adhere to the design and architecture approved by Client in the design phase of the project, and as checked by CAST AIP Architecture Best Practices. Deviation from design will be acceptable where a better approach is evolved during the coding phase and is mutually agreed upon with the Client	3.01	Zero Violations – Please refer to the appendix for the list of critical architectural rules
Documentation	Delivered codebase will have inline documentation as per the standard coding guidelines and as checked by CAST AIP documentation guidelines	2.50	
	Delivered codebase will not	3.2	Zero Violations – Please

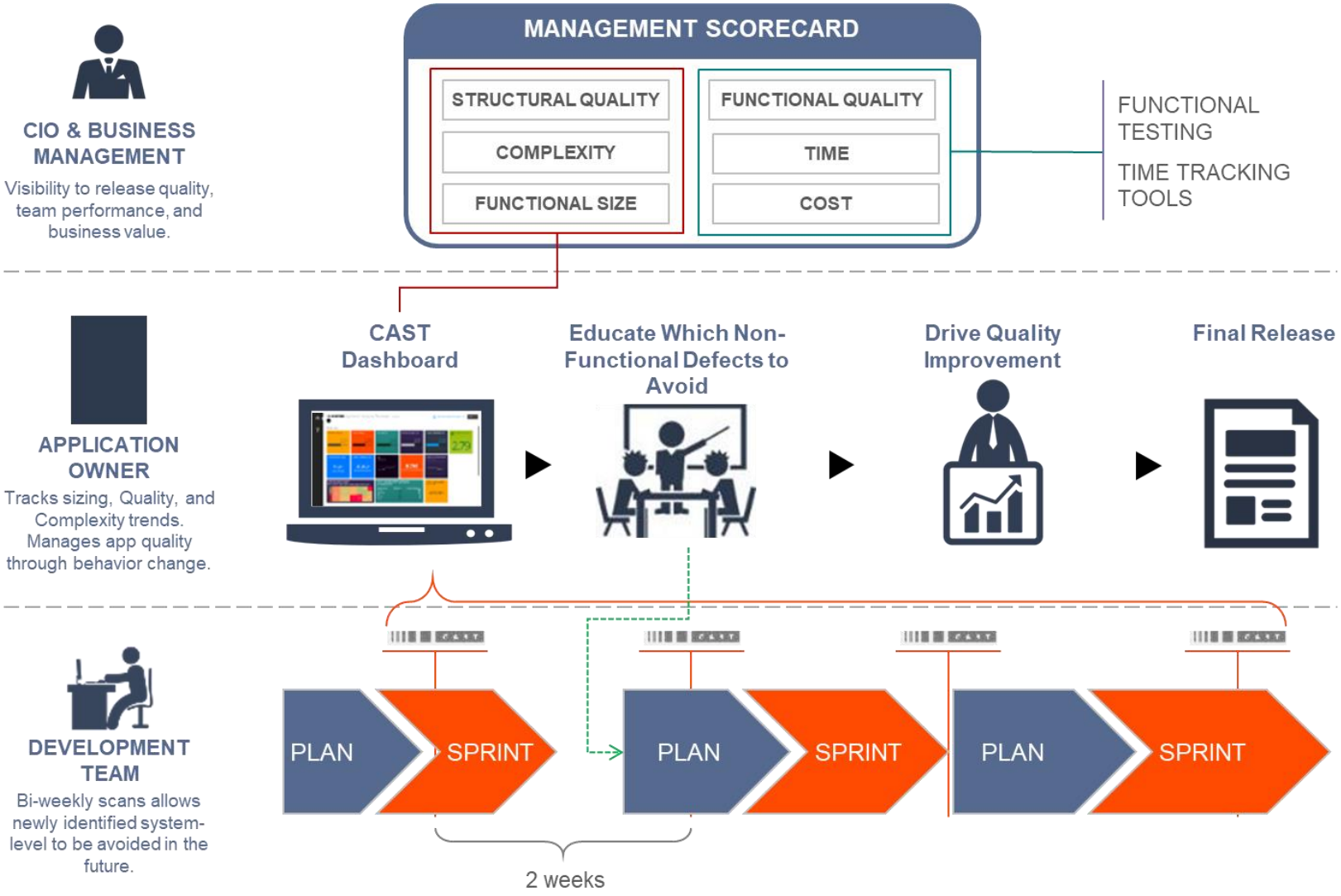
Measure and demand minimal set of acceptance criteria for any new development or release

CAST for Agile

CAST high level analytics are extracted when required to be reported to business lines/CxO level

CAST dashboards are used by product/application owners and technical managers to monitor Agile developments

CAST run every sprint or every 2 sprints, prioritized and critical actions are automatically integrated into Agile/DevOps backlog



Identify Opportunities for Savings

T&M, COST-PLUS, FIXED SCOPE

SAVINGS SOURCE	DESCRIPTION
Improve Efficiency	Added scrutiny and quality gates at the code drop and in development will streamline QA efforts and reduce delivered defects.
Reduce Incidents	Structural analysis and proactive visibility will prevent technical issues that can't be found in testing from making it into live systems.
Billing Negotiations	Negotiating prices or man days with ADM suppliers based on objective productivity or quality measures & benchmarks.
Reduce Technical Debt	Speeds up time-to-market, applications become easier to maintain and change. Typically begins when new violations under control.
Hawthorne Effect	Improvement of productivity experienced typically at the onset of visibility, due to developer behavior and client partner exposure.

Case: Outcome-Based Vendor Management

TANGIBLE VALUE

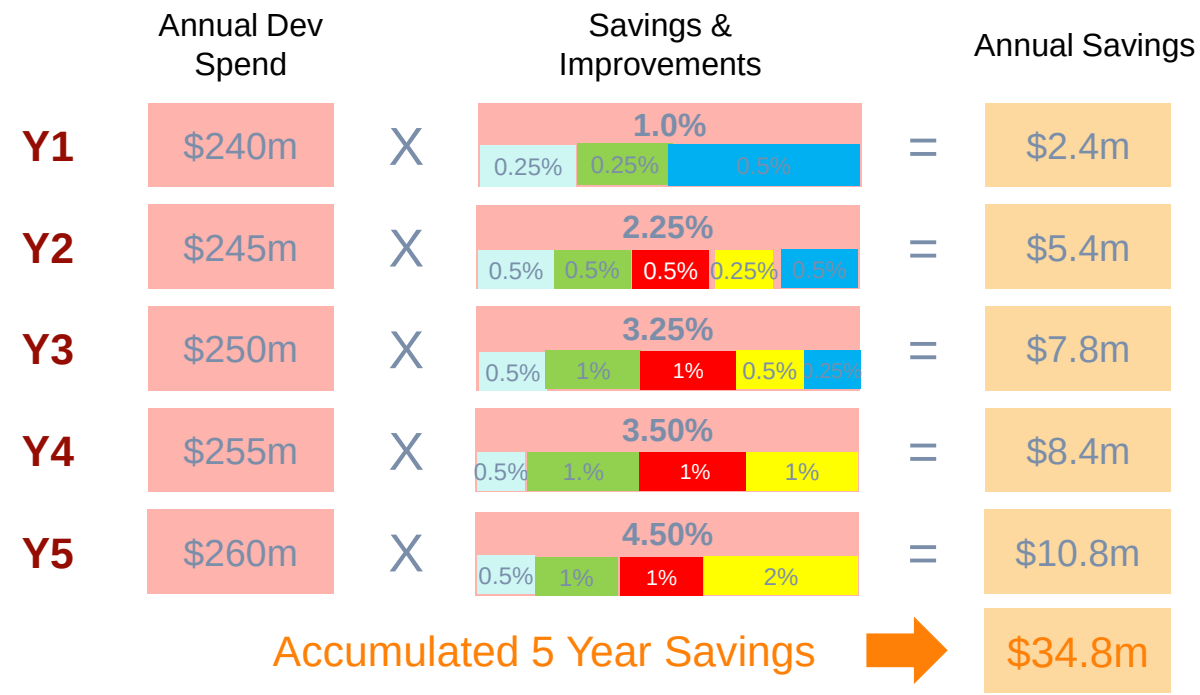
- Knowing the cost/value profile of each of your strategic ADM services partners
- Enabling your vendor teams to control quality and risk at the source, before QA and production
- Controlling technical debt to enable future Digital strategies
- Impact on vendor teams of establishing visibility over quality and productivity

FINANCIAL SAVINGS

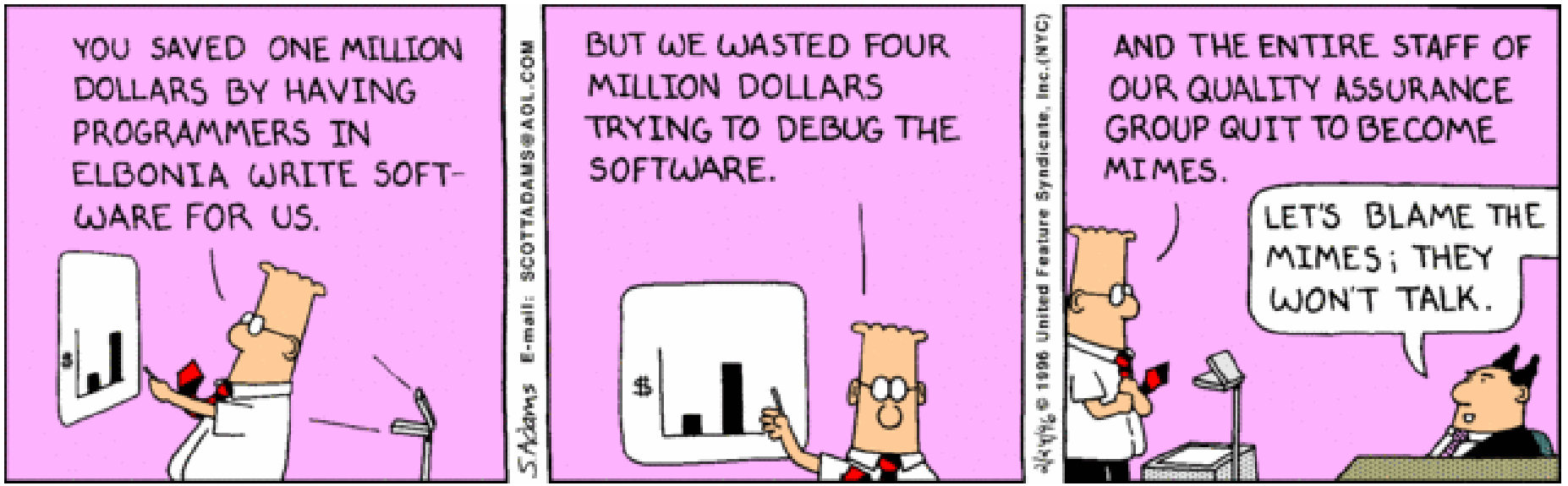
Clients typically achieve **5% - 15%** savings by year 3.

- Improve Efficiency
- Reduce Incidents
- Billing Negotiations
- Reduce Tech Debt
- Hawthorne Effect

See next slide for definitions



Quality of outsourced software is no laughing matter



- Scott Adams figured this out in 1996

Back up slides

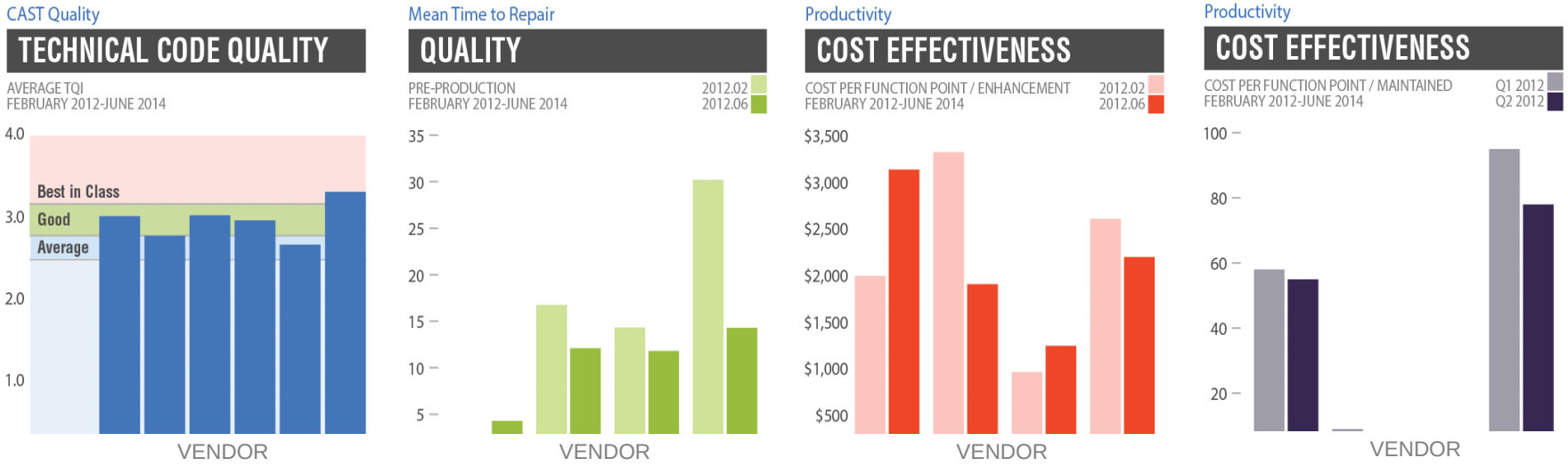
Objective Measurement Creates Visibility

1 Scorecards

The goals are simple

- Deterministic metrics that are unambiguous
- Common language between client and suppliers
- Common goal to reduce total cost of ownership
- Quick and crisp feedback loops

Monitor Performance Over Time *(may include in-house suppliers)*



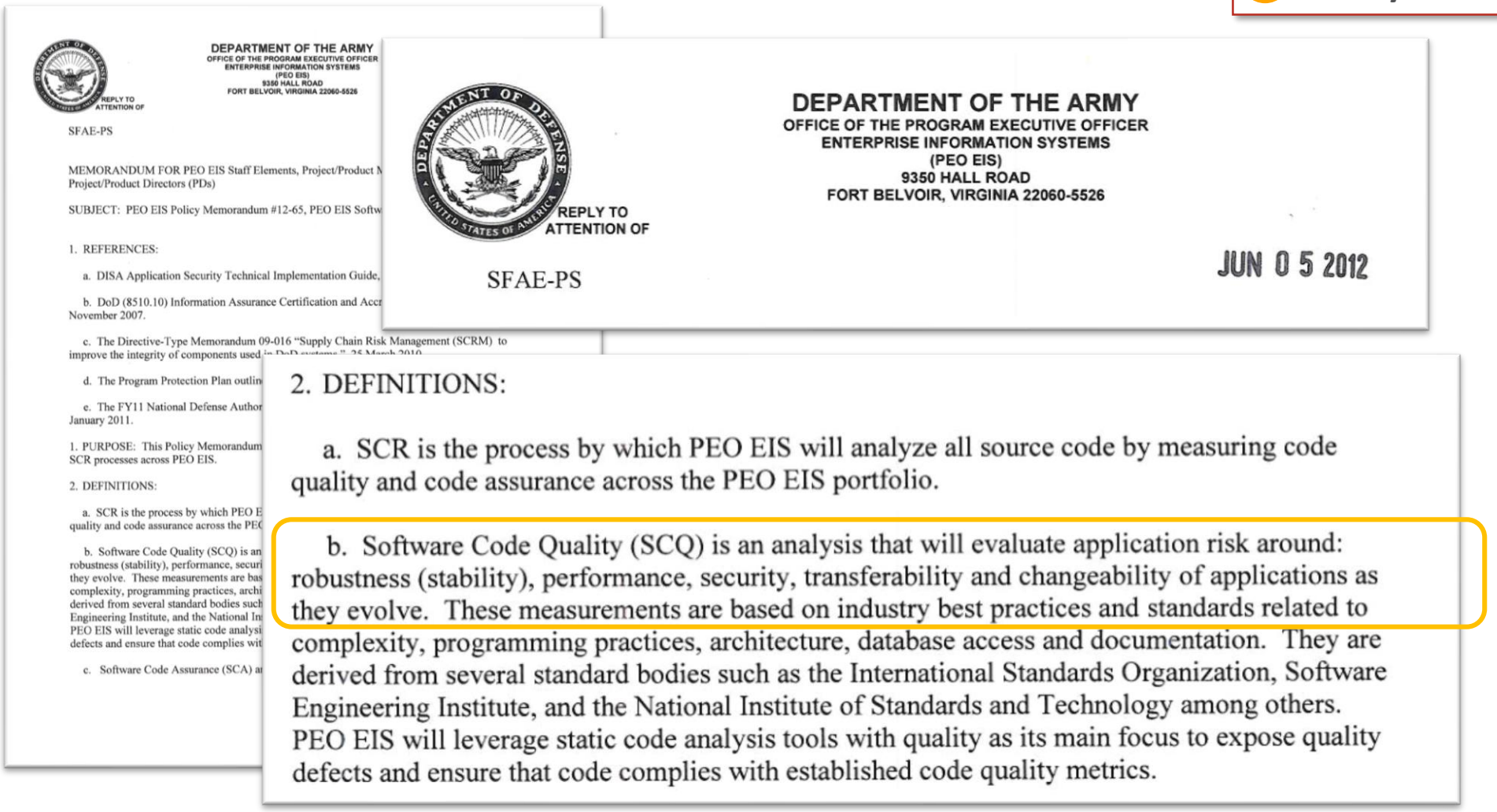
Scorecard Service Providers

Supplier	TQI	Robustness	Performance	Security	Transferability	Changeability
VENDOR 1	2.59	3.16	2.34	3.01	1.99	2.44
VENDOR 2	2.81	2.78	2.78	3.12	2.34	3.03
VENDOR 3	2.59	1.67	3.54	2.98	1.76	2.99
VENDOR 4	3.06	3.12	3.11	2.79	3.11	3.15
IN-HOUSE 1	2.83	2.56	2.88	3.03	2.56	3.11
IN-HOUSE 2	2.90	3.76	2.89	2.97	2.55	2.33

Quality Driven Software Development Policy

2 Policy

- All software has to be checked for overall quality
- Audit procedures to ensure compliance
- Score is objective and transparent



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SLA Measured by Objective Data

CAST

3 SLAs

At Risk Amount and Allocation of Risk

Total Billing Per Release :	$1,000,000
Total At Risk Amount (10% of Invoice) :	$100,000
Total Risk Pooler:	100%

10% is for example

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Amount service provider has at risk on this individual Service Level is:

30% * 50% * $100K = $15,000

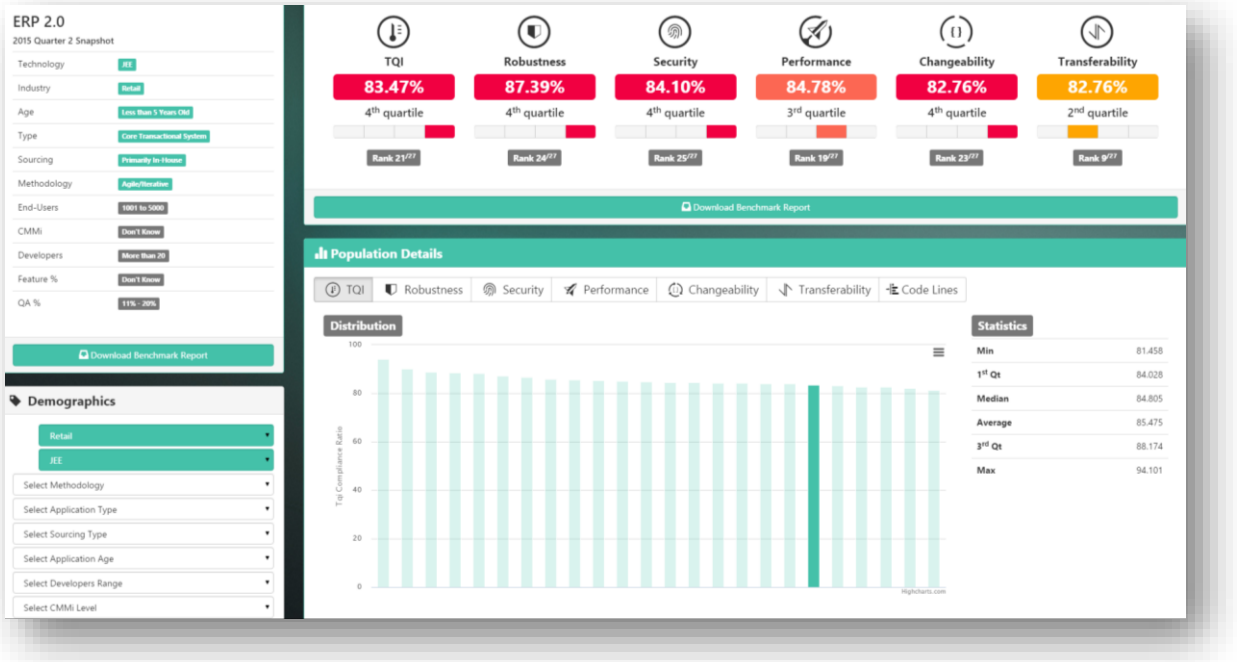
- Anytime there is a default, the at-risk amount will be applied
- Incentive is given to service provider equivalent to the at risk amount if they exceed the Expected Service Level by 5% of the delta between the then current Expected and Perfection
- Credits / Incentives are settled at the Annual Reset

- SLA developed by strategic sourcing organization at large telco
- $$ amounts changed from original; %'s were preserved
- Mix between high-level indicator (TQI) and specific risks (critical violations)

Acceptance Criteria – Industry Benchmark

4 Acceptance

- Large asset management financial services firm
- Greenfield project, no code to analyze before project start
- Acceptance targets set based on achieving top quartile according to industry benchmarks



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Security	Delivered codebase will not introduce any new security vulnerability issues and as checked by CISQ Security rules	3.05	Zero Violations – Please refer to the appendix for the list of critical Security rules
Performance Efficiency	Performance results of the modules developed by VendorCompany will fall within Franklin Service Level Agreements as described in the Non-Functional Requirements and as checked by CISQ Performance Efficiency rules.	3.2	Zero Violations – Please refer to the appendix for the list of critical Performance Efficiency rules
Reliability	Delivered codebase will incorporate error handling as per the approved design and adhere to CISQ Reliability rules.	3.2	Zero Violations – Please refer to the appendix for the list of critical Reliability rules
	Delivered codebase will have changeability criteria (i.e., flexibility	3.26	Zero Violations – Please refer to the appendix for

CAST ADM Measurement Solution

Solution Description

- Provide visibility to management, manage risk, quality and throughput through enhanced Service Level Agreement
- Focus on Top AD/AM applications of outsourced development

Common Client Challenges

- Frequently missed deadlines and budget overages when releasing enhancements
- No consistent measure of metrics (time, tickets, cost…)
- No fact based metrics to use on contracts

Key Client Stakeholders

- CIO
- Head of Applications
- Business Partner (on IT side)
- Release Manager

CAST

Activities

- Measure applications within an IT portfolio to establish a baseline
- Measure on-going activity, trends of application size, complexity and quality characteristics.
- Normalize size, complexity and quality metrics
- Benchmark metrics with previous release

Inputs

- Effort, algorithmic, SQL, object complexity
- Critical violations and violation with high weight
- Health Factor trends
- Automated Function Points and Automated Enhancement Function Points

CLIENT / ADVISOR

Activities

- Define set of metrics and thresholds as a scorecard
- Trend set of density ratios
- Benchmark normalized metrics with previous release
- Define set of metrics and expected quality to check in the quality gate and use as KPI or SLA in contracts.

Inputs

- Pre-PROD Risk Density: Critical violation/ AEFP
- Defect Delivered: Defect /AEFP
- Maintainability risk: TechDebt / AFP
- Change Productivity: cost (AD)/AEFP or AFP (AM)
- Run Productivity: cost (AM) / AFP

Deploy & Measure

Outputs

- Transparency, quality and risk management, and SLAs
- Baseline analysis and on-going comparisons on Agility, responsiveness and Productivity change

Expected Value

- Establish pre-production Quality Gate on sizing, quality and complexity.
- “Stick” to measure the vendors on quality and productivity (for fixed price engagement)
- Objective measures to verify vendors’ billings (for T&M)
- Improved Production stability and IT short term risk