

Lecture 6: Balance Score Cards and Capability Maturity Model

March 2022

Peter Kimemiah

Content

- Balance Score Cards
- Capability Maturity Model
- Project Management
- Software Development Methodology
- CAT Final

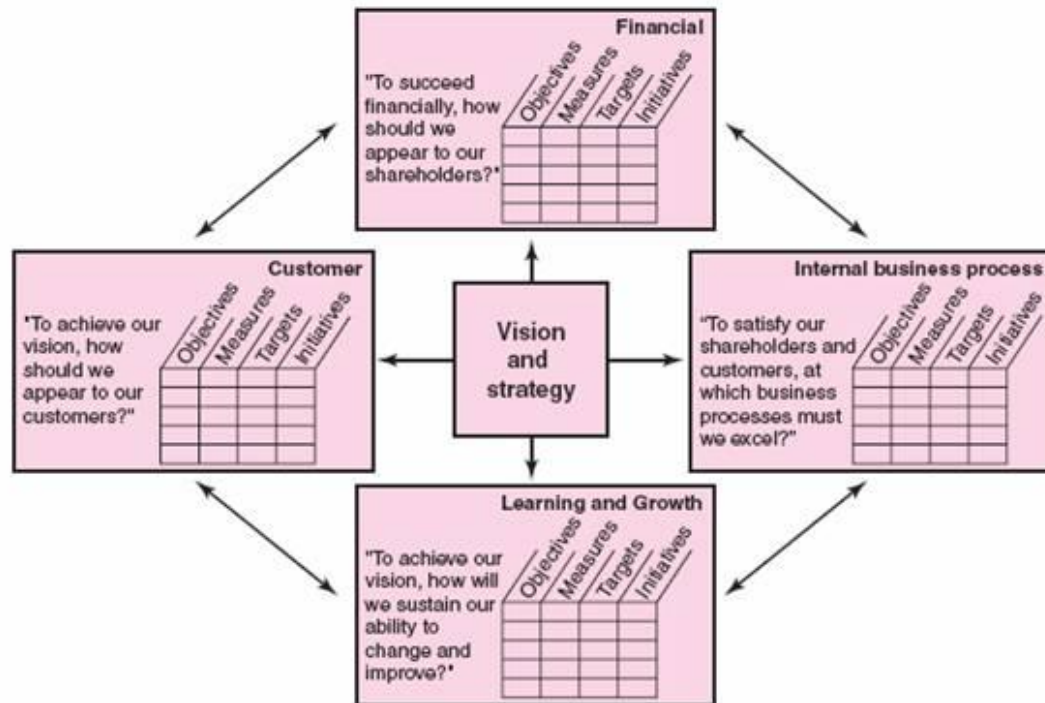
Balance Score Card

- The balanced scorecard (BSC) is a strategic planning and management system. Organizations use BSCs to:
 - Communicate what they are trying to accomplish
 - Align the day-to-day work that everyone is doing with strategy
 - Prioritize projects, products, and services
 - Measure and monitor progress towards strategic targets

Balance Score Card

- Has four perspectives
 - Financial
 - Customer
 - Internal Business Process
 - Learning and Growth
- These are linked to the vision, mission and strategy

Balance Score Card



Objectives and Key Results (OKR)

- Objectives and Key Results (OKR) is a framework used by organizations and individuals for collaboratively setting ambitious goals, tracking progress, and aligning action with an organization's strategy to achieve measurable results.
- Often associated with technology companies (such as Google, Twitter, Spotify, Airbnb and LinkedIn) or those that focus on Agile methodologies
- The OKR model can be used by any sized organization in any sector.
- OKRs create an analytical basis for decision making and help focus attention on what matters most.

Components of Balance Score Cards

- Strategy Map
- Key Performance Measures (KPI)
- Strategic Initiatives

Balance Score Cards

- **Objectives** capture what you want to accomplish (a broad goal) in a qualitative sense
 - Example: Improve the Customer Experience
- **Key Results** capture/measure what you hope to accomplish in a quantifiable sense
 - Example: 10% increase in our Net Promoter Score by the end of the quarter



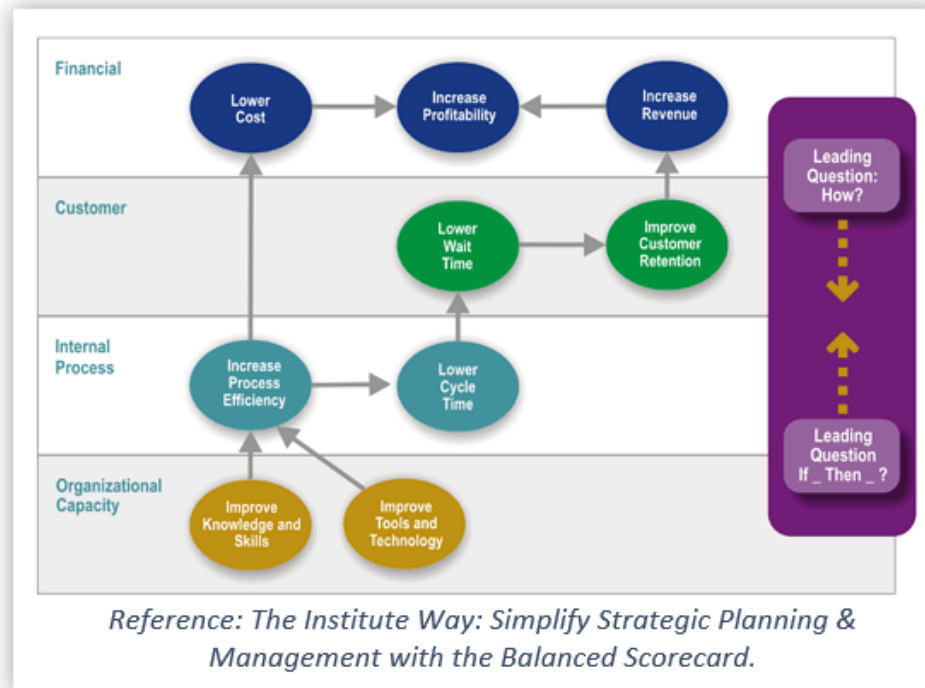
Objective:
Improve the
Customer
Experience

Key Result:
5% increase in our Net
Promotor Score by the end
of the quarter

BSC - Strategic Maps

- A strategy map shows a logical, cause-and-effect connection between strategic objectives (shown as ovals on the map). It is one of the most powerful elements in the balanced scorecard methodology, as it is used to quickly communicate how value is created by the organization.
- **A typical strategy map will have four perspectives and between 12 and 18 strategic objectives.**
- Like the example above, most for-profit companies put the financial perspective on top because their end goal is to make more money.
- For public sector organizations, however, finances are more of a means to an end.
- Since a government or nonprofit's final goal is to provide the best services it can, it is common for them to switch the top perspectives so that Customer/Stakeholder is on top.

BSC - Strategic Maps



BSC – Form Example

Electric Utility, Inc. – Balanced Scorecard Example

	Objectives	Measures (D=Drivers)	Targets			Initiatives
			FY01	FY02	FY03	
Financial	<ul style="list-style-type: none"> Maximize returns Profitable growth Leverage asset base Manage operating costs 	<ul style="list-style-type: none"> ROCE Revenue growth Asset utilization rate Operating costs / customer 	14% 8% 80% \$150	14.5% 8% 85% \$140	15% 12% 90% \$125	
Customer	<ul style="list-style-type: none"> Industry leading customer loyalty 	<ul style="list-style-type: none"> Customer Satisfaction Rating 	80%	85%	90%	<ul style="list-style-type: none"> Customer loyalty program
Internal Processes	<ul style="list-style-type: none"> Business Growth Capitalize on delegation opportunities Optimize trading opportunities Develop innovative services Use alliances and joint ventures Leverage cross-group R&D 	<ul style="list-style-type: none"> % revenue from delegated products/services % trading revenue Revenue from new services % customers serviced through alliances/joint ventures NPV product/service pipeline % R&D projects meeting protocol gates (D) 	5% 10% \$300M 10% \$300M 90%	7% 12% \$550M 20% \$550M 95%	10% 15% \$600M 25% \$600M 100%	<ul style="list-style-type: none"> Telecom infrastructure development Trading risk assessment Research alliance program
	<ul style="list-style-type: none"> Continued Public Support Proactively manage relationships Ensure reliable services Communicate/educate customers 	<ul style="list-style-type: none"> Customer/employee satisfaction (5 point scale) Reliability index % communication/education coverage % communication/education plans executed (D) 	4.0 90/100 100% 80%	4.5 92/100 100% 85%	4.5 95/100 100% 90%	<ul style="list-style-type: none"> Preventative maintenance Community outreach
	<ul style="list-style-type: none"> Customer Service Excellence Seamless cross-group delivery Understand customer drivers 	<ul style="list-style-type: none"> Promise delivery % New product uptake rate On-time market projects (D) 	90% 20% 90%	95% 25% 95%	97% 30% 100%	<ul style="list-style-type: none"> Cross-selling marketing program Service dispatch automation
	<ul style="list-style-type: none"> Effective customer services Optimize Core Business Optimize asset utilization Max return on resource allocation Continued cost management Enterprise-wide risk management 	<ul style="list-style-type: none"> Customer satisfaction rating C.S.D. (see above) Problem resolution cycle time C.S.D. (D) % rate capacity attained Employee productivity improvement % cost reduction Cost of disruption vs. plan Time to recovery (D) 	85% 8hr 90% 2% 4% +/-15% 8hr	89% 4hr 85% 3% 5% +/-10% 4hr	95% 3hr 90% 4% 8% +/-5% 2hr	<ul style="list-style-type: none"> CIS upgrade Call center software integration Fossil maintenance benchmark Shared service benchmark/outsourcing initiative ERP Implementation
L&G	<ul style="list-style-type: none"> Ensure market-driven skill Leading employee satisfaction World Class Leadership 	<ul style="list-style-type: none"> Strategic skill coverage ratio Hours in strategic skills training (D) Employee satisfaction rating (5 point scale) Leadership effectiveness ratio (5 point scale) 	65% 10 3.0 4.0	75% 12 4.0 4.5	85% 15 4.5 4.5	<ul style="list-style-type: none"> Competency profiling Performance compensation link Leadership training program

BSC - Key Performance Indicators

- Key Performance Indicators (KPIs) are the critical (key) indicators of progress toward an intended result.
- KPIs provides a focus for strategic and operational improvement, create an analytical basis for decision making and help focus attention on what matters most.
- As Peter Drucker famously said, “**What gets measured gets done.**”
- Managing with the use of KPIs includes setting **targets** (the desired level of performance) and tracking progress against that target.
- Managing with KPIs often means working to improve **leading indicators** that will later drive lagging benefits.
- Leading indicators are precursors of future success; **lagging indicators** show how successful the organization was at achieving results in the past.

Balance Score Card Measures

- Strategic Measures
- Operational Measures
- Project Measures
- Employee Measures

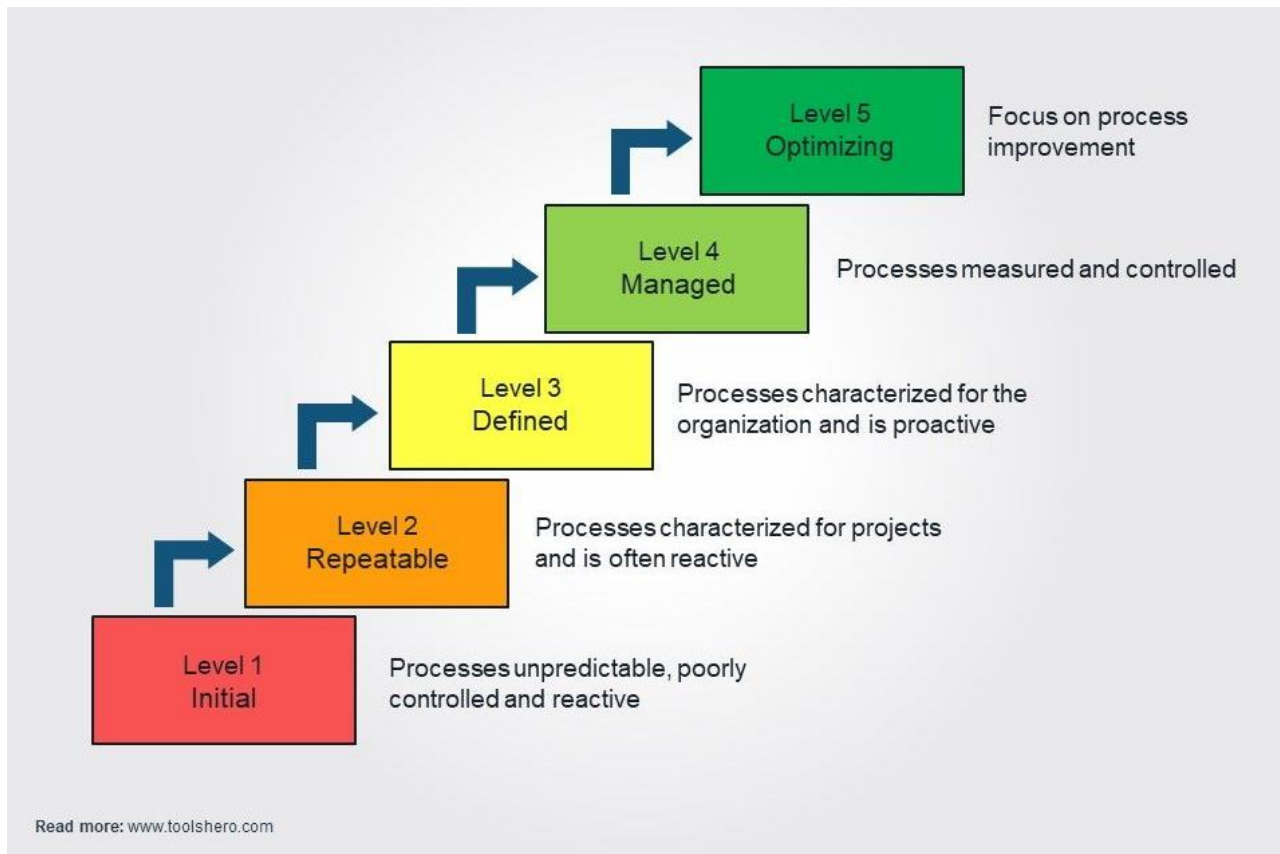
Capability Maturity

- The Capability Maturity Model (CMM) is a methodology used to develop and refine an organization's software development process.
- The model describes a five-level evolutionary path of increasingly organized and systematically more mature processes.

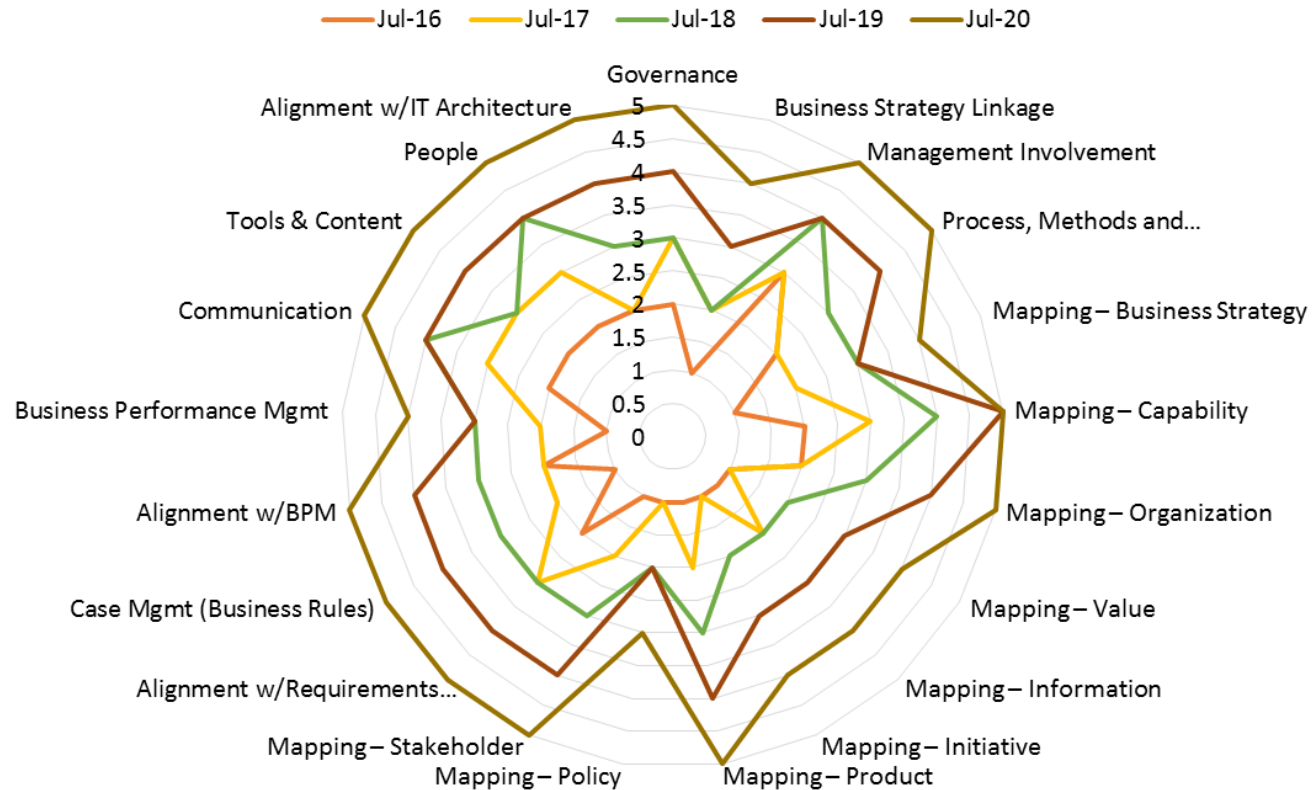
Capability Maturity

- **CMM's Five Maturity Levels of Software Processes**
 - **initial** level, processes are disorganized, even chaotic.
 - **repeatable** level, basic project management techniques are established, and successes could be repeated
 - **defined** level, an organization has developed its own standard software process through greater attention to documentation, standardization, and integration
 - **managed** level, an organization monitors and controls its own processes through data collection and analysis.
 - **optimizing** level, processes are constantly being improved through monitoring feedback from current processes and introducing innovative processes to better serve the organization's particular needs

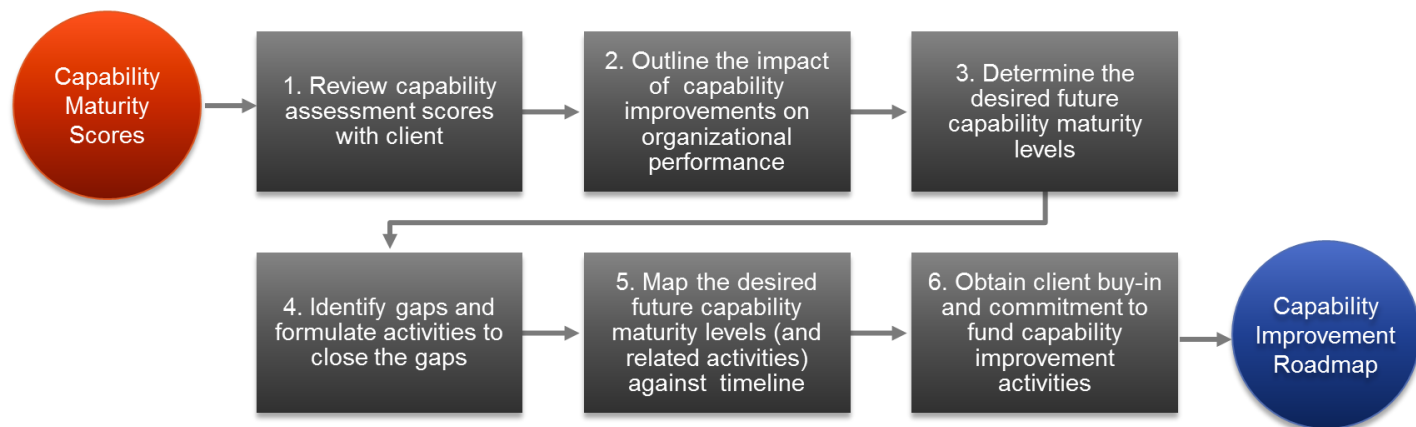
Capability Maturity



Capability Maturity Ratings Current State and Planned Future States



Scores and Road Maps



COBIT Maturity Models

Non-existent Initial Repeatable Defined Managed Optimised



LEGEND FOR SYMBOLS USED

- Enterprise current status
- ↑ Industry average
- ★ Enterprise target

LEGEND FOR RANKINGS USED

- 0—Management processes are not applied at all.
- 1—Processes are *ad hoc* and disorganised.
- 2—Processes follow a regular pattern.
- 3—Processes are documented and communicated.
- 4—Processes are monitored and measured.
- 5—Good practices are followed and automated.

Question

- Discuss with examples the following stating the purpose and benefits of each
 - MIS Audit
 - MIS Project Audit
 - Security Audit
- In implementing MIS system such as ERP, which methodologies would be used in the selecting, implementation and reviewing a customised ERP solution?
- What are the benefits and disadvantages of using packaged software instead of customised software?
- How does building new systems produce organizational change and what are the various risks and benefits?

Areas that can help you answer the questions

- ◉ DISASTER RECOVERY PLANNING AND BUSINESS CONTINUITY PLANNING
- ◉ RUNAWAY PROJECTS AND SYSTEM FAILURE
- ◉ SYSTEMS DEVELOPMENT AND ORGANIZATIONAL CHANGE
- ◉ APPLICATION SOFTWARE PACKAGES AND OUTSOURCING
- ◉ INFORMATION REQUIREMENTS AND KEY PERFORMANCE INDICATORS

References

- [1]B. S. Institute, 'Balanced Scorecard Basics', Balanced Scorecard Institute. <https://balancedscorecard.org/bsc-basics-overview/> (accessed Mar. 04, 2022).
- [2]S. Few and Stephen Few, Information Dashboard Design. O'Reilly, 2006.
- [3]W. W. Eckerson and Wayne W. Eckerson, Performance Dashboards: Measuring, Monitoring, and Managing Your Business. John Wiley & Sons, 2006.
- [4]K. C. Laudon and J. P. Laudon, Management information systems: managing the digital firm, THIRTEENTH EDITION. Pearson Education Limited, 2003. Accessed: Feb. 23, 2022. [Online]. Available: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1415-65552003000100014&lng=pt&tlng=pt