INFORMS Analytics Maturity Model

User Guide

Introducing the INFORMS Scorecard

INFORMS, the leading association for advanced analytics professionals, seeks to advance the practice, research, methods, and applications of advanced analytics by providing valuable, relevant guidance to individuals and institutions as they pursue analytics initiatives. INFORMS considers analytics to be **the scientific process of transforming data into insight for making better decisions**. In INFORMS' view, Analytics is broadly inclusive and encompasses practices and techniques from multiple disciplines.

To advance the practice of analytics, INFORMS has developed an Analytics Maturity Model (AMM) scorecard that serves to:
- Introduce an analytics function/department to corporations and organizations that don't currently have an analytics capability;
- Enable those already involved in analytics to assess their level of effectiveness (i.e. beginning, developing, advanced);
- Help plan improvements to the analytical function in order to solidify their strengths;
- Help advance their function to a higher level.

The scorecard is based on twelve questions that indicate your organization's analytics maturity. The questions are grouped into three broad sections:

- Organizational – does your organization have the practices and culture to enable effective use of analytics?
- Analytics Capability – does your organization possess the methods, models, and services needed to perform analytics?
- Data & Infrastructure – are data sufficiently integrated and infrastructure present to support analytics?

The questions provide focus areas for benchmarking capabilities and identifying specific actions that your organization might take to improve analytical maturity. Further explanations of key terms used in the questions are provided in the appendix.

The scorecard questions are focused as shown below:

Organizational Questions	
People	Focuses on awareness and acceptance of the use of analytics by employees to support their job/roles within the organization.
Leadership Impact	Focuses on the level of support and commitment by those in leadership positions.
Measures	Focuses on analytics-based metrics that drive decision making.
Processes	Focuses on the use of analytics within processes and activities such as product design, manufacturing, sales and marketing, R&D, etc.

Analytics Capability Questions	
Analytics Governance	Focuses on how well the organization has defined and documented an approach for making decisions, and if it is optimized to support key operational or investment decisions that provide value.
Roles and Skills	Focuses on the analytic talent that the organization has on hand and how the depth and breadth of talent is being managed.
Analytic Services	Focuses on the analytical spectrum (descriptive, predictive, prescriptive models) and the breadth and depth of techniques used.
Analytic Processes	Focuses on identification of the analytical processes that support business processes and how well they are standardized and integrated across the organization.

Data & Infrastructure Questions	
Health	Focuses on quality of the organization's data, and the adoption of data quality management practices.
Access	Focuses on ability of employees at all levels of the organization to get the data they need for use in their day-to-day activities. The range of formats and access speed would be important considerations.
Traceability	Focuses on the ability of an organization to trace from data to decisions, through the use of Master Data Management and Lifecycle Management practices.
Analytics Architecture	Focuses on the degree to which the Enterprise Architecture considers analytical capabilities and the pervasiveness, variety, and access modes of the capabilities provided.

Using the Scorecard

You can choose to use either 'Quick' or 'Full' assessment depth. The 'Full' option enables goal setting, and provides links to services that are relevant to your assessment results.

Select Depth of Assessment

Compare product features	Quick	Full
	Short on time? Simply see where your company ranks	Set goals and get advice to improve your score
	Start	Start
Score your Organization	●	●
Compare Against Industry Benchmarks	●	●
View Progress Reports	●	●
View Assessment Summary Reports	●	●
Learn how to improve your rank, including links to specific services	●	●
Set Goals		●

The scorecard is presented one question at a time. An example question is shown below:
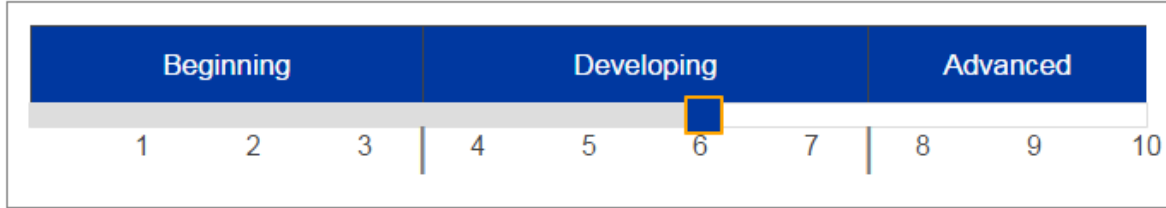

Below the answers, the scorecard provides a scale where you can click on the scale value that represents your organization's current or "As-Is" state. Further space is available to provide rationale behind the chosen score, and any additional notes.

If you selected the 'Full' assessment option, a second part of the question provides an option to set an incremental goal within a realistic time period. You can click on the scale value to establish the goal level, and optionally provide a date and action plan for achievement. If desired, you can also opt out of setting any or all goals by checking the 'skip factor' box.

An example goal setting is shown below:

Click 'Continue' to advance to the remaining questions.

After all four questions for the section are completed, the scorecard displays a section summary, as shown here:

Section Rating

How mature is Your Organization?

FACTOR	SCORE	MATURITY	GOAL
PEOPLE	4 ✎ EDIT	Developing	6 ✎ EDIT
LEADERSHIP IMPACT	3 ✎ EDIT	Beginning	5 ✎ EDIT
MEASURES	4 ✎ EDIT	Developing	5 ✎ EDIT
PROCESSES	3 ✎ EDIT	Beginning	5 ✎ EDIT

Current Status vs. Goals

Your Organization

After completing the assessment, the scorecard presents an overall summary, as shown here:

You have the option to 'Save' or 'Cancel' the assessment. If saved, you will be able to monitor progress over time as future assessments are made.

What Next?

After completing the assessment, you'll find a set of links that describe ways that INFORMS can help you achieve your goals.

Career Center

Are you ready to hire analytics and operations research professionals? Visit the INFORMS Career Center to place your posting for an analytics professional.

Learn More

Certification

For an isolated analytics professional, certification will provide a means for continual professional development and perhaps help you find a better working situation by setting you apart from others.

Learn more

Continuing Education

INFORMS provides courses that let you and your organization's analytics professionals keep their analytics credentials up-to-date and learn important new concepts that can be applied at the workplace. Visit the course, Essential Practice Skills for Analytics Professionals.

Learn More

University Links

University analytics and operations research departments can guide the professionals at your organization. To locate a university department that can collaborate with your organization on graduate research, training, or hiring, consult this database.

Learn more

Academic Members

Do you want to explore a partnership with a university professor on a specialized analytics project? If you become an INFORMS member, you can examine the INFORMS Member Directory to identify INFORMS academic members, their specialty, and their proximity to your office. Collaborations have been a hallmark of finalists in INFORMS' annual best cases competition for the Franz Edelman Award.

Journals

Discover your company's potential: Browse the journal *Interfaces* for articles that introduce the potential of analytics. Companies have long partnered with academics to aid in the understanding of data. Visit the *Interfaces* page on PubsOnLine, and search for terms that best describe your company's industry, e.g., sports, energy, security, service, non-profit.

Learn more

Not sure where to begin?

I would like assistance in creating a plan to improve my organization's scores.

Contact INFORMS

Appendix: Key Terms Explained

Center of Analytical Excellence – a facility or organizational entity providing leadership, practices, and technology covering a wide range of analytics capabilities and application areas.

Certified professional – an individual with the INFORMS Certified Analytics Professional or similar credential.

Descriptive analytics – methods, largely from the fields of statistics and visualization, that summarize a set of data in a quantitative or graphical way, indicating similarities, differences, or logical groupings, or trends. Examples include: a clustering analysis to find groupings of customers likely to behave in similar ways; a correlation analysis or graph to portray how the values of two or more factors may move together.

Predictive analytics – the use of techniques from statistics, data mining and machine learning disciplines, to predict a quantity or group membership or future state of entities of interest. Examples include: the use of logistics regression or classification trees to classify telecom customers into those likely to churn or not (i.e. discontinue service); use of neural networks to predict the likely outcome of a medical procedure.

Prescriptive analytics – methods that may combine techniques from operations research and other disciplines to achieve an "optimal" solution to a complex quantitative problem. Examples include: the use of optimization algorithms to produce a schedule for employees and/or other resources; the use of machine learning algorithms to automate a loan approval process.

Data Quality Management – practices and methods focusing on all of the quality-related attributes of data and providing processes and tools to ensure that quality goals are met.

Master Data Management – an approach consisting of standards, processes, and tools to help ensure that a single version of master data (the principal entities) is maintained and accessible.

Lifecycle Management – an approach to managing data, software, systems, models, documents, etc. that tracks and provides visibility from inception through end of service life.