

# Data Science Roadmap Worksheet

## Introduction

Nearly every enterprise is going through a digital transformation, but organizations vary greatly in terms of their ability to utilize the data they're storing to automate decisions or operations.

The goal of this worksheet is to help enterprise organizations identify gaps in their data science capabilities and to develop a roadmap that will lead to more efficient data science operations and more productive data science teams. We developed the worksheet through extensive research with enterprise companies, and identified 15 competencies shown to impact data science success in an enterprise environment.

# Data Science Roadmap Worksheet

<p><b>Instructions:</b> Use the scoring rubric to grade your organization (1-3) for each of the 15 core competencies of enterprise data science effectiveness</p> <p>1 = Little to No Competency      2 = Moderate Competency      3 = Full Competency</p>			
	<b>Competency</b>	<b>Criteria</b>	<b>Score (1 3)</b>
Talent	Hiring and retention	Is your organization able to effectively attract, hire, and retain "top tier" data science talent?	
	Leadership alignment	Is there regular planning, alignment on project expectations, and agreed upon budget sharing between IT, business, and analytics leadership?	
	Collaboration between teams	Do data science, business, and IT teams have cohesive workflows and open channels for regular communication?	
	Education and learning	Does your organization conduct regular analytics training, seminars, or workshops?	
	Performance management	Are your data scientists evaluated against clear and defined individual and team-based performance metrics?	
Technology	Data and resource access	Do data scientists have self-service access to data, environments, and computing resources with limited reliance on IT?	
	Security	Are data, credentials, project access, and integrations all continually monitored across data science teams?	
	Tools	Do data scientists have access to a wide range of open source tools, libraries, and languages to tackle analytical projects?	
	Version control	Do data science teams use version control systems like Github to ensure that all work is tracked, searchable, and reproducible?	
	Model management	Are your data science teams able to deploy and manage models with minimal workflow frictions between engineering and IT teams?	
Technique	Workflow efficiency	Is data science work self-service- meaning there is minimal reliance on other teams to access resources, put work into production, etc?	
	Standards and governance	Do data science teams have standardized and repeatable processes for executing analytical workflows that are documented and shared across teams?	
	Innovation	Are your data science teams continually experimenting, leveraging cutting edge methods, and proposing innovative solutions to business problems?	
	Delivery	Are data science teams able to deploy work in various formats (ex: visualizations, reports, model APIs) to meet business needs?	
	Project management	Are your data science teams using agile approaches (ex: DataOps) for building and deploying data products?	

# Scoreboard

	<b>Instructions:</b> Sum your scores from each competency to identify whether your organization is a laggard, part of "the pack," or a leader for each category			
		<b>Laggard (5-7 pts)</b>	<b>The Pack" (8-11 pts)</b>	<b>Leader (12-15 pts)</b>
<b>Talent</b>	Does your organization have the managerial foundation and processes in place to lead data science initiatives effectively?			
<b>Technology</b>	Does your organization have the technology infrastructure needed to enable scalable, secure, and mostly self-service data science workflows?			
<b>Technique</b>	Do your data science teams have best-in-class and highly repeatable processes that produce reliable outputs to the business?			

## Conclusion

Effective data science requires much more than statistical analysis, and we hope that this assessment has helped your organization identify opportunities to improve data science operations and productivity.

No matter where you are in your journey, a data science platform can help your teams work more efficiently by providing a project-based workspace that centralizes all the tools and infrastructure required to make data science work at scale. If you'd like to learn more about Oracle's DataScience.com platform, please reach out to a member of our team at [sales@datascience.com](mailto:sales@datascience.com).

### Recommended reading:

[Development workflows for data scientists.](#) O'Reilly Media (2017) <http://bit.ly/2Fyr7fR>

[DataOps: an Agile Methodology for Data-Driven Organizations.](#) MapR & DataScience.com (2017) <http://bit.ly/2CM7Btm>

[Scaling knowledge at Airbnb.](#) Airbnb (2017) <http://bit.ly/2qDEJ1k>

[Are you setting your data scientists up to fail?](#) HBR Digital (2018) <http://bit.ly/2FaRL0y>

[Leadership vision for 2018: Data and Analytics Leader.](#) Gartner (2017)

[The Insights Driven Business Playbook.](#) Forrester (2018) <http://bit.ly/2F9rU9u>

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