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DDDM and the 5 Levels of Data Maturity

Data Culture and Data Driven Decision Making

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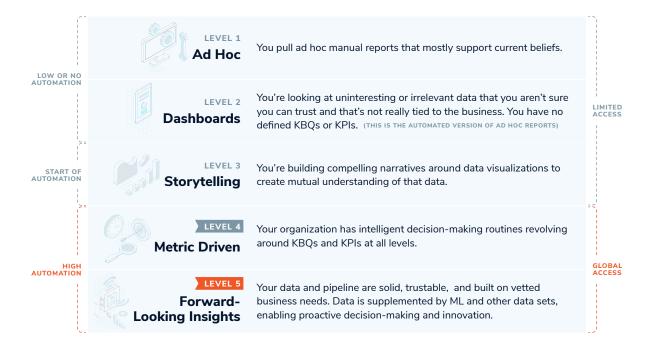# Your Journey to Data Driven Decision Making

By the end of this article, you will have a better understanding of where your organization lies on the path to data maturity. You'll be able explain to colleagues why you're where you are, what DDDM is, and begin to recognize the value of moving your data culture forward quickly.

| Assess | Align | Strategize | Implement | Measure | Improve | Support |

productOps Data Maturity Roadmap

At productOps, we look at data proficiency from a number of different perspectives, just as most organizations do. In order to align different parts of the organization—for example, Sales and IT—we first assess where the organization is on a Data Maturity scale of 1–5, with level 5 being very forward-looking and predictive (see fig 1). Then we work with all parties to understand the current level so we can build common goals and a strategy for improving.

Figure 1: productOps Digital Maturity Scale

LOW OR NO AUTOMATION

LEVEL 1
Ad Hoc
You pull ad hoc manual reports that mostly support current beliefs.

LEVEL 2
Dashboards
You're looking at uninteresting or irrelevant data that you aren't sure you can trust and that's not really tied to the business. You have no defined KBQs or KPIs. (THIS IS THE AUTOMATED VERSION OF AD HOC REPORTS)

LIMITED ACCESS

START OF AUTOMATION

LEVEL 3
Storytelling
You're building compelling narratives around data visualizations to create mutual understanding of that data.

LEVEL 4
Metric Driven
Your organization has intelligent decision-making routines revolving around KBQs and KPIs at all levels.

HIGH AUTOMATION

GLOBAL ACCESS

LEVEL 5
Forward-Looking Insights
Your data and pipeline are solid, trustable, and built on vetted business needs. Data is supplemented by ML and other data sets, enabling proactive decision-making and innovation.

As Maturity Level Increases, the Value of Your Data Increases

Expanding access to data, and increasing the organization's ability to govern that data, means more ideas and more potential solutions are realized. In turn, those projects generate new comprehensible and trustworthy data.

What Is DDDM?

Data-driven decision-making (DDDM) is the organizational practice of using data to influence, predict, and measure strategic business decisions against desired outcomes.

Think of Your Data Culture as a Journey

Traditionally, organizations would "pull reports" on a specific set of data for the limited viewing of a few select decision makers, typically upper management. Think spreadsheets and the antiquated notion of the executive dashboard. In modern data-driven organizations, the entire data set is well governed and widely available. Instead of a few key executives making decisions from possibly outdated information, everyone has access to up-to-date information and an opportunity to influence strategic decision-making. If an issue with a motor occurs in the field, for example, someone on the assembly line can quickly understand possible causes in the assembly process.

Data Maturity Self Assessment

What follows is a quick self assessment. Read through the brief description of each of the 5 levels of data maturity and answer the subsequent questions. This will give you an idea of where organization is at, and where you may need assistance.

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LEVEL 1
Ad Hoc

DDDM Maturity Level 1: Ad Hoc

You pull ad hoc manual reports that mostly support current beliefs. Very few people in the organization can view the data or participate in the decision making process.

Questions

1. Are you asking a person for the data?
2. Are spreadsheets your only or preferred tool?
3. Do individual departments define their own metrics?

LOW OR NO AUTOMATION | PRESCRIPTIVE | LIMITED VIEW

LEVEL 2
Dashboards

DDDM Maturity Level 2: Dashboards

You're looking at data that you aren't sure you can trust and that's not explicitly tied to your business goals. You have no defined KBQs (Key Business Questions) or KPIs (Key Performance Indicators). This is the automated version of the ad hoc reporting that is the norm for Level 1.

Questions

1. Are you asking the system for the data?
2. Do you have standard definitions for relevant terms? (Example: How is an active user defined by different members of the organization?)
3. Do you have a standard place for people to retrieve report information?

LOW OR NO AUTOMATION | PRESCRIPTIVE | LIMITED VIEW

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DDDM Maturity Level 3: Storytelling

You're building compelling narratives around data visualizations to create mutual understanding of that data. View of the data is expanded and decision making is now influenced by more people and by inferences based on data.

Questions

1. Can you dig in and look at data in different ways other than as a static dashboard?

2. Are you combining data from multiple relevant sources?

3. Are you able to drill down into the data you have?

START AUTOMATION | INFERENTIAL | EXPANDED VIEW

LEVEL 4
Metric Driven

DDDM Maturity Level 4: Metric Driven

Your organization has intelligent decision-making routines (see fig 2) revolving around KBQs and KPIs at all levels. All appropriate people in the organization have access to the data.

Questions

1. Are you supporting or defending decisions with KBQs, KPIs, and OKRs defined?

2. Have the data silos been torn down and data made available organization-wide?

3. Do you have a review process to monitor continued improvement of business goals?

4. Is your data trusted by the organization and under a full governance plan?

HIGH AUTOMATION | INFERENTIAL | GLOBAL ACCESS

Figure 2: OODA Diagram: Observe, Orient, Decide, and Act

Observe, Orient, Decide, Act

These decisions and actions are not a fire and forget process. The company needs to take on a Observe, Orient, Decide, Act (OODA) culture. Monitoring these changes against an agreed upon set of indicators.

Each action will have a different timeframe to when you will see impact. Some changes will require development cycles and distribution where others may just be messaging or marketing campaigns. As soon as the action has been taken it is time to have dashboards and reports ready to watch for changes.

Start where you are, not where you want to be.

LEVEL 5

Forward-Looking Insights

DDDM Maturity Level 5: Forward-Looking Insights

Your data and pipeline are solid, trustable, and built on vetted business needs. Data is supplemented by ML and other data sets, enabling proactive decision-making and innovation.

Questions

1. Are you augmenting data with ML and external sources (e.g., real-time input of weather information to inform shipping routes)?

2. Are you vetting decisions against multiple models before taking action? (e.g., Should I open a store in Wichita?)

3. Does your data environment inform you of events that may occur in the future? (e.g., predictive models for supply chains just prior to a hurricane.)
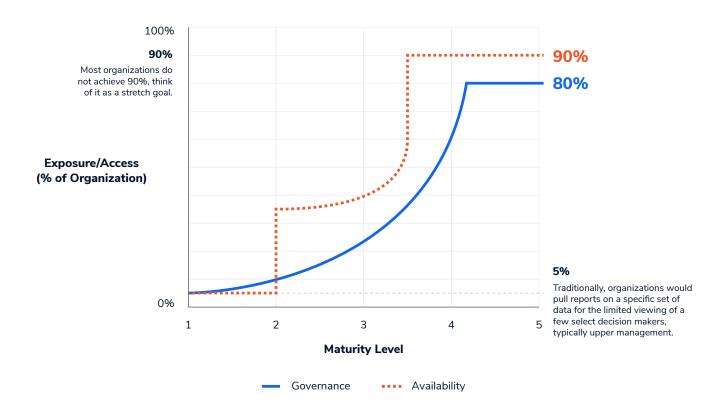
HIGH AUTOMATION | PREDICTIVE | GLOBAL ACCESS

So What's Next?

Now that you understand where you are, the next step is to really define your needs and what it will take to meet them. You can certainly do this by gathering the appropriate people throughout the organization and determine where all of your data is, what format it's in, what business goals and KBQ's you need to address, what your culture looks like, and what victory looks like for you

No two organizations are the same however based on our experience, the journey typically looks like the diagram below. As access increases, so does the value of data because more people are making better decisions using it.

100%

90%
Most organizations do not achieve 90%, think of it as a stretch goal.

90%

80%

Exposure/Access (% of Organization)

5%
Traditionally, organizations would pull reports on a specific set of data for the limited viewing of a few select decision makers, typically upper management.

0%

1   2   3   4   5

Maturity Level

—— Governance   ····· Availability

We've done this hundreds of times and we can get you started.
We typically begin with an initial consultation. One or two exploratory phone calls, and ideally a whiteboard session. We never spam or hard sell, and we may be able to help steer you in the right direction. There is no cost or obligation for this.

No single solution fits every organization perfectly. Our data platform is designed to be quickly customized so we can build the right solution for a client's needs. So if we discover that we can help and you believe we're the right partner, then we typically engage in a short discovery project. This is a low risk, low cost engagement designed to give you a clear picture of where you are, and to deliver valuable recommendations on how you can get to Level 5.

About productOps

productOps is a consulting firm that delivers its strategic insight as a software 'product', and has been designing, building and implementing data platforms since before anyone thought to call them that. We can be reached at dataqueries@productops.com

Contact us

Ryan French
831-214-4714
ryan.french@productops.com

Bob Cagle
831-466-3000
bob@productops.com