7 AVOIDABLE MISTAKES WITH DATA PRODUCTS

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A data product makes a data asset reusable and consumable. Data assets can be datasets, dashboards, machine-learning models and more. Here are some of the pitfalls you should consider when building data products.

Product Thinking
Thinking like an engineer, not a product designer

Product thinking means making design decisions in context of the problems a user needs to solve. This process can bridge the gap between data engineering and user experience to deliver the outcomes that matter. Designing a data product that meets your requirements is a good first step but will not necessarily meet the needs of consumers. Only by understanding your customers' challenges and use cases through a product thinking mindset can you be sure that your data product will be a success.

Consumability
Not making the product easy to use or consumable

If you get into a car, you expect to be able to drive away with minimum fuss. Similarly, a critical concern with data products is the ability to easily gain access and deploy it, and then consume the data resources packaged in data products in the relevant business process. There is little point in designing a slick user interface only to present data a user cannot trust, but equally, there is no point in making the user journey so intolerably complex that you need to be an 'expert' just to use its basic features.

Lifecycle Management
Thinking that product management is a linear process, not a lifecycle

A successful data product presents complex challenges from inception to retirement. A lack of understanding, or a failure to address each key aspect of a data product, is likely to lead to that data product failing to meet expectations. The selection and application of a product lifecycle management methodology is a vital step to addressing all perspectives of data product. Most importantly, by planning resources appropriate to each phase of a cycle, you can better manage a portfolio of data products.

Beyond Data Sets
Designing a standalone product that does not go beyond the data asset

Typical data products might be lists of data records in text files, event streams or newspaper pages. But a data product can be so much more. A data product is something that transports and provides data assets and resources to a business capability, activity, or process. That could encompass any data structure from a single event to whole data sets, ML models and even data platforms. There is an entire 'supply chain' in which a data product can operate – being aware of the interdependencies and relationships between underlying data assets is the first step in making contextual design decisions.

Characteristics
Failing to recognise the importance of metadata

Metadata is crucial when it comes to product quality and usage. Not all data products are created equal but considering the key characteristics (typically expressed as metadata) of any data product on an individual basis will help to ensure the overall quality of the data product. Apart from being definitive on the data asset and its schema, further information for product support, deployment, instructions on data use, permissions, obligations, and pricing should also be considered when creating and consuming data products.

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Data Foundations

Not following best practices in data management to govern usage of multiple assets

A data product is more than the sum of its parts. Whilst a data asset may be a data product, it's more likely that a data product is composed of multiple data assets. For example, a data product designed to provide film recommendations will read not just the event log of what a user has historically watched, but also call a movie database to see what it could recommend. In this example, two different data assets are informing a single data product output, but the movie database itself could be a data product. Any data and data management best practices that are employed within a data producing organisation must be applied to data products and therefore require the same attention that data assets attract. Furthermore, using a 'production line' approach to create and deliver quality data products can scale and continue to meet data agreement obligations.

Data Product Strategy

Throwing your team into data products without a clear plan

The many moving parts, variety of business cases and potential scalable application of data products make a data product strategy a key basis for the success of data products for both producers and consumers. The rewards of data products will result from a thorough understanding of data products along with a commitment to data products as a key part of success with data. Ensuring that a data product strategy is aligned to the data strategy, organisational objectives and the needs of its constituent users is difficult, but a necessary task to prevent costly downstream mistakes.
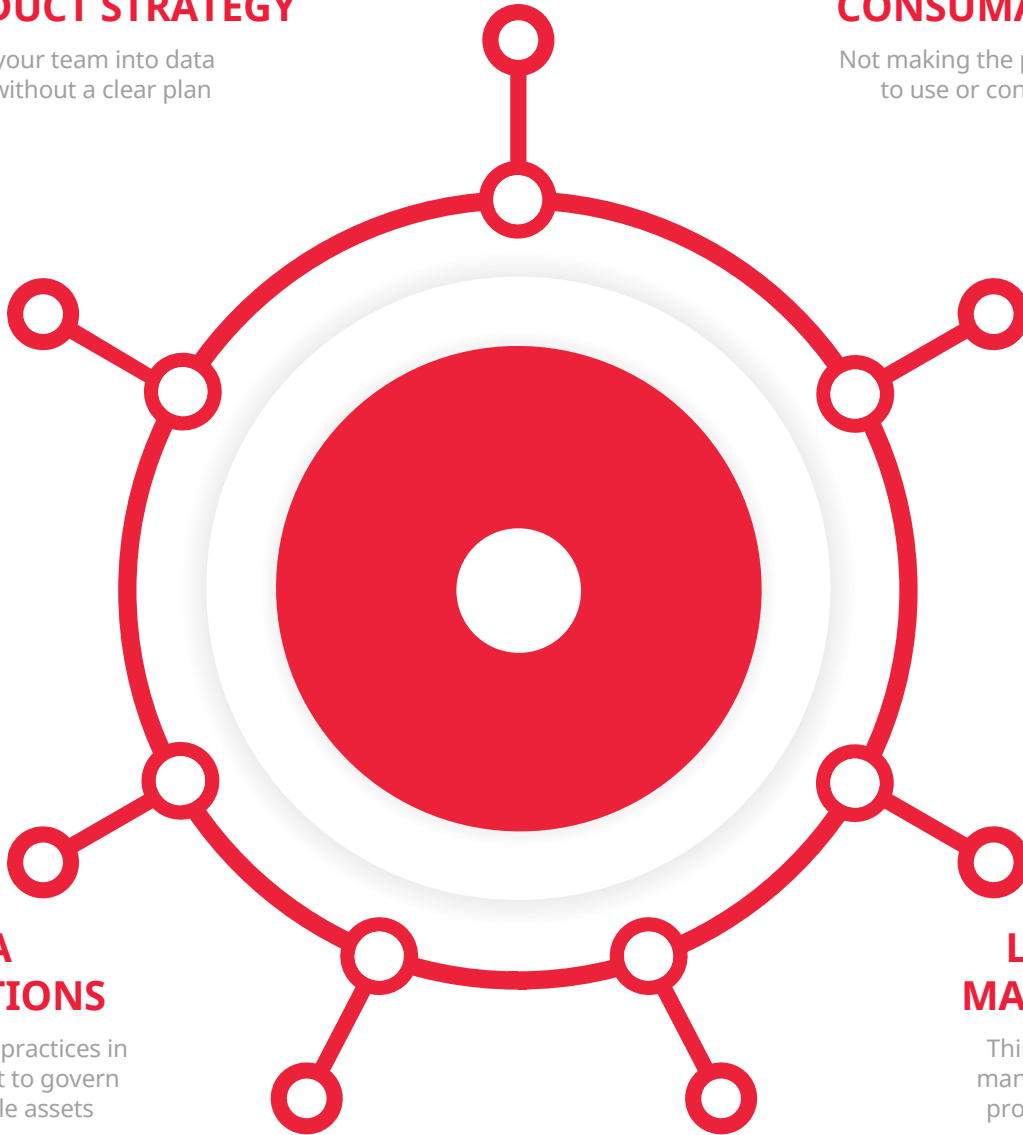
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