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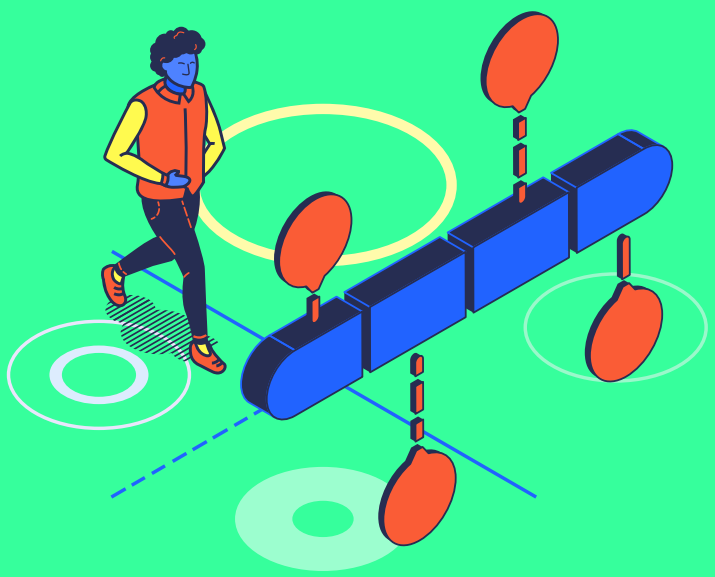


Finding a path to Data Strategy

A Toolkit For The Higher Education Sector

Foreword

We are all aware that Hight Education (HE) itself is in a state of transition and change, institutes have had to react swiftly and effectively to the effects of Covid, with online and hybrid curriculums and virtual student services. There has been high level planning, forecasting and measures put in place to mitigate the impact of Brexit, and Data Futures is waiting in the wings for its turn on centre stage.

At the same time, digitally-native students, who do almost everything online in their personal lives, expect the same online, on-demand student service from their institutes.

In response to these internal and external challenges, institutions are increasingly turning to their data to help them understand the lay of the land, only to find that they are unable to access, or interrogate their data in a meaningful way. On the one hand a misalignment between data that's collected and housed, and the universities strategic goals means that data can't be used to drive university objectives. On the other hand, issues around data warehousing technology and analysis and dashboarding capabilities means that data that is available, can't be accessed and integrated and interrogated in an intelligent manner.

Organised, accessible, intelligent, predictive, and even prescriptive use of data, which supports Universities as they deliver their strategic goals, whilst providing an enhanced student experience across the organisation is the holy grail of university data strategy. By working towards these principles, universities can revolutionise the way they see and use data to inform their business decisions.

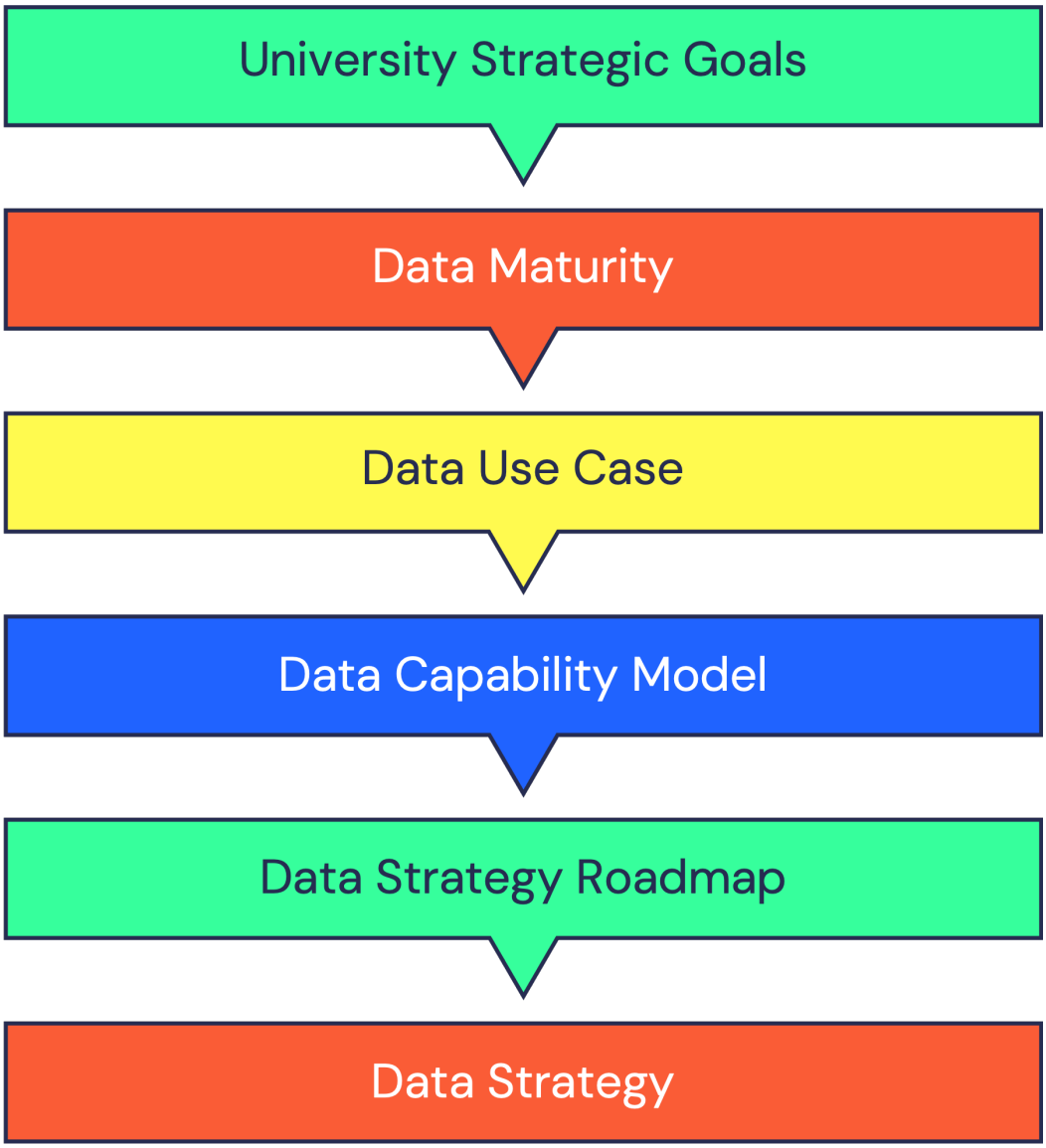
Creating a Data Strategy for your institution might seem like a daunting task, but in this guide, we give you some tools and tips so you can start to think more strategically about data. By using a methodology which allows you to identify quick wins, and strategically important investments, you can start to map out your own institutions data strategy.

So, how does (good) data help your institution?

1. Data supports the delivery of strategic institutional goals
2. Intelligent use of data enhances the student experience and drives student outcomes
3. Data transforms day-to-day university operations for staff

> **Data; to know what our customers want before they ask for it**
>
> Alex Denley
> LSBU

Data Strategy Overview



The Guide to building a Data Strategy

Identify your University Strategic Goals and define your Data Vision

Before you get going with building a Data Strategy at your institution, make sure you have understood the University's corporate and strategic goals for the future. Having these in mind will help you frame your data strategy in the context of delivering your university goals. Understand what the overriding vision for the data strategy is, and the principles which underpins it.

Translate those goals into key business questions

Next understand how institutional goals translate into key business questions and identify use cases which answer those key questions and support the delivery of those goals. Once you have identified your use cases you should consider these through the lens of the key data dimensions, identifying barriers to success within each.

Review your current Data Maturity

Spend some time talking to key stakeholder and perhaps take a survey to understand how data is used across the organisation. By understanding where you are in terms of your data maturity across all the key dimensions, you are well positioned to develop and deliver a programme of works within your newly defined data strategy

Identify your University Strategic Goals and define your Data Vision

Review your data governance and data quality policies and understand where your data is, and how it is stored and used. Identify where there are gaps and duplications and where data is not fit for purpose. Create and maintain a data asset register and understand who your data owners and responsible stakeholders are.

The Guide to building a Data Strategy

Define use cases which will help you answer those key business questions

Use Cases help institutions bring to life issues around interoperability, skills and capabilities & data governance and data quality. You should define cases which if embedded, will ensure that you are using your data in the most efficient way.

You might also prioritise use cases which provide the most significant return on investment not only in terms of financial impact, but also on resourcing, and the supporting of university objectives. You could also identify some quick win use cases, these are strategically important wins, that might not require significant investment or resource.

Remember:

- Use cases are the foundation stones for your data strategy
- Data Use Cases are driven by your strategic goals
- Your data use cases are your key data projects or priorities for the year ahead

Review each of your use cases, using the key dimensions as a guide to help you understand the challenges and barriers to success.

With key stakeholders across the institution, explore each of the use cases and understand where within each of the dimensions, challenges and barriers lie. By identifying these issues, you can begin to create a suite of recommendations for resolution – these aspirations and recommendations form the foundations of your data strategy.

Key Dimensions:

- Data Governance and Leadership
- Skills and Culture
- Data Collection, Use and Analysis
- Tools & Technologies

The Guide to building a Data Strategy

Remember:

- Create a data use case for each data project
- Each data use case may have the same issues or challenges/themes.
- Prioritise your use cases for your data strategy, they may not all make it into your final strategy.

Create your Data Strategy, complete with Recommendations and a Roadmap for completion

Once you have worked through your key use cases, you can start to map out each of the recommendations needed to achieve those goals. Make sure you have key stakeholder buy in to help you define, prioritise, resource and budget each of those recommendations. By relating them effectively back to your university's strategic goals the return on investment should be clear to see.

Data Use Cases: What should they include?

It's a good idea for each of your use cases to have considered the following:

Strategic Goal

What is the strategic goal that this data use case will meet? There should be a link between the use case and your institutional strategic goals.

Let's take the following Use case example, 'Developing an early warning system and personalised prevention plan for 'at risk' students.' This may link to a strategic objective which focuses on improving student engagement or one that focuses on better league table positioning, or both.

Objective

What are the business questions that this data use case will help you answer?

In the example given, it might answer the following questions: Which students are at risk of exiting their programme of study? Have they entered, or been supported by the University previously? And if so, in what way? What is their grade history? What are the options for support to ensure the student remains engaged and able to complete their studies?

KPIs

What does success look like and how will you measure it? What are the expected results?

In our example you might expect firstly to see an increase in the number of students identified as vulnerable or at risk of withdrawal and an increase in referrals to university support schemes. You may subsequently to see a reduction in withdrawals and failed modules, and better overall achievement. You may also get additional data on challenging modules or programme formats and data on how well a particular intervention works against another.

Data Use Cases: What should they include?

Owner/Sponsor

Who will the data use case owner be? There must be one, otherwise the project is likely to fail.

In our example, it may be the head of student welfare who is responsible for the project's success. They will need to engage with other stakeholders, but ultimately, they own the project.

Data Use Case Users

Who will be the users of this data use case and the audience of the resulting insights?

In this example, the owner is also a user. Other users would be the operational and academic teams supporting at risk students.

Data

What data is required for this use case? Consider whether it is internal/external, if it exists already or needs to be created, is it structured data (e.g., databases and spreadsheets), and/or unstructured data (e.g., social media posts). The best way to create a comprehensive picture is to combine different data sets.

In our example, you could use applicant and admissions data (previous grades/ personal statement/declared disabilities etc) as well as current student, module, and course data from your student information system. You might also use unstructured data in the form of tutor feedback and group messages to get an accurate picture.

Data Governance

What data governance, data privacy, data access, data ownership, and data security are needed? Are there any challenges in any of these areas? Define how you are going to maintain data quality & data ethics.

In our example its particularly important to identity how you are going to keep data safe and ensure it is only used for the purpose it was intended. Collecting and storing data, especially personal data, brings serious legal and regulatory obligations. You might need to consider asking permission from students to use their data in this way, and to anonymise broader data sets for analysis.

Data Use Cases: What should they include?

Data Analysis

What is your proposed approach to turn data into the insights needed? For example, text analytics, image analytics, predictive and prescriptive analytics.

In our example do you want to utilise advanced prescriptive analytics where the data can provide recommendations on course of action? Or are you expecting a less advanced model of analytics?

Technology and Tools

Identify your technology and infrastructure challenges, implications, and requirements? For instance, data collection, data storage, data processing, data output, communication of insights.

In our example you might want to consider whether you technology supports the collection and co-mingling of this data to be able to conduct analysis, and whether your analysis tools allow you to do the level of analysis you require.

Resource

Who will deliver this both in project phase and once it moves to a business-as-usual model? Consider if inhouse resource will be used, if so, do staff need training or will some/or all tasks be outsourced to a third-party?

In our example you might need to ensure that operational staff are on hand to support a higher level of identified at risk students, in a wider variety of ways.

Change management requirements

What is the implementation and change management needs? Identify potential roadblocks and risks. Communicate to staff and leadership team why the project is happening and what new systems are being implemented and how it will benefit the organisation.

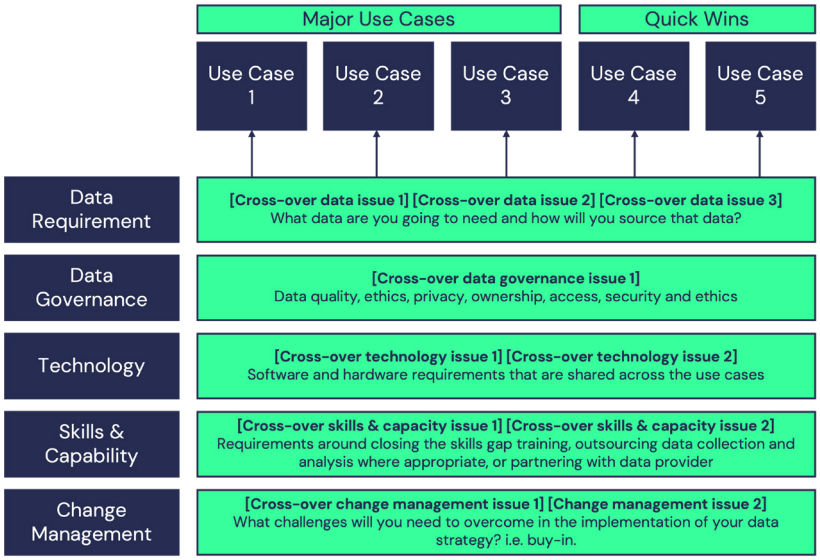
In our example you may need to communicate why the change is necessary, how it will impact on BAU activities and the advantages it will bring to both staff (better analysis of at-risk students) and students (earlier engagement and better outcomes).

Using a Data Capability Framework to frame your use cases

The information you have collected by identifying and exploring each of you use cases gives you a great foundation for building your strategy and you can use that information to build your Data Strategy by considering each use case in the context of a data capability framework. To do this, take each of your use cases and consider them through the lens of the 5 capability dimensions, identifying barriers to achieving measurable success against each of your use cases.

1. Data Requirements
2. Data Governance
3. Technology
4. Skills and Capacity
5. Change Management

Your data capability framework should look something like this.



Remember:

By identifying cross cutting issues you start to build a picture of where you are now, where you want to be, and the steps you need to take to get there. This vision for the 'to be' is the foundation for your Data Strategy.

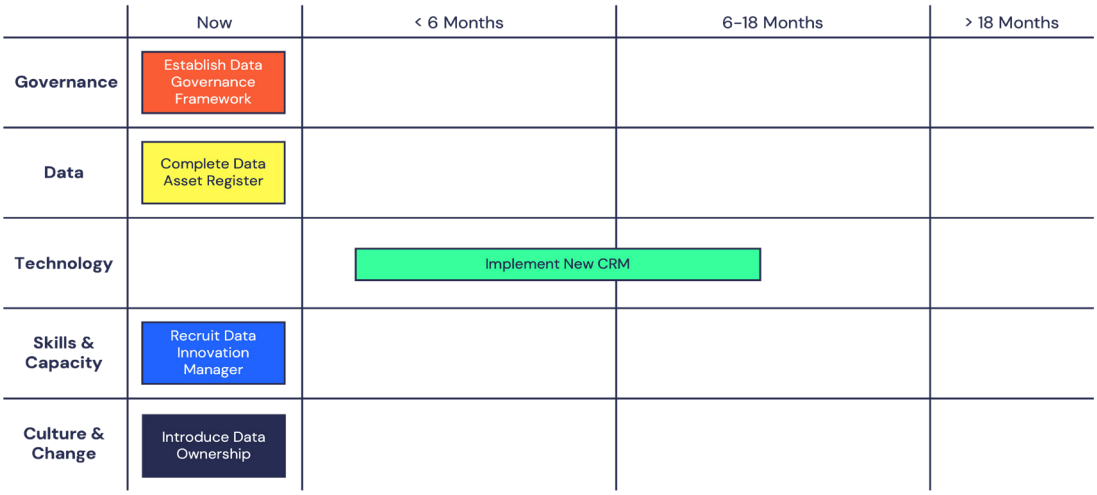
Building a Data Strategy Roadmap

Once you have each of your use cases considered within your data capability framework you can then start to build a roadmap of actions to help you deliver your data strategy.

You might want to review where current projects are already underway and whether their scope already includes or could be expanded to include these initiatives. Roadmaps are a journey, its not realistic to expect everything to be delivered at once. Consider resourcing and budgetary constraints as well as dependencies to help define this effectively.

You should consider the following when building a Roadmap or programme of works:

1. Project Owner
2. Budget Required
3. Resources
4. Timescales including quick wins
5. Priority
6. Key Stakeholders
7. Alignment to University Strategic Objectives



Remember:

This roadmap is a journey to achieving your Data Strategy Goals. Each activity should be aligned with the University strategic direction of travel. Executive and Key Stakeholder buy in, is key.

Writing your Data Strategy

By now you have several clearly defined Data Use Cases which outline your Institutions vision for data in the future.

You have a roadmap & Programme of works which outlines how the institution will achieve those goals, these together form the foundation for your Data Strategy. You might want to keep the Strategy simple with a one-page visualisation that outlines your institutions data ambitions, or you might want to supplement this with a full Data Strategy paper which outlines the ambition, and the following in more detail:

- A compelling vision for data at your institution
- The educational landscape and context which your data will be used
- Definition of what successful execution of the strategy will look like
- Definition of how success will be measured
- Definition of the capabilities (people, process, data, technology) required to execute the strategy
- Definition of the data principles to guide the strategy
- Definition of the data architecture that will underpin the strategy
- Definition of the data governance that will assure the strategy
- The roles and responsibilities of those who will make it happen.

Embedding Data Strategy across the Institution

One of the most important aspects of Data Strategy is making sure that it's embedded across the institution. Consider creating a cultural alignment and change management programme which communicates how this strategy supports the delivery of institutional goals. Deliver the strategy intention effectively across the institution, ensuring stakeholders and data owners are on board and empowered to embed across the organisation.

And so there you have it, a guide to creating a data strategy for your institution.

The Author

Equantiis hopes you have found this guide to creating a Data Strategy useful. If you would like our help in facilitating or formulating your Data Strategy, please get in touch.

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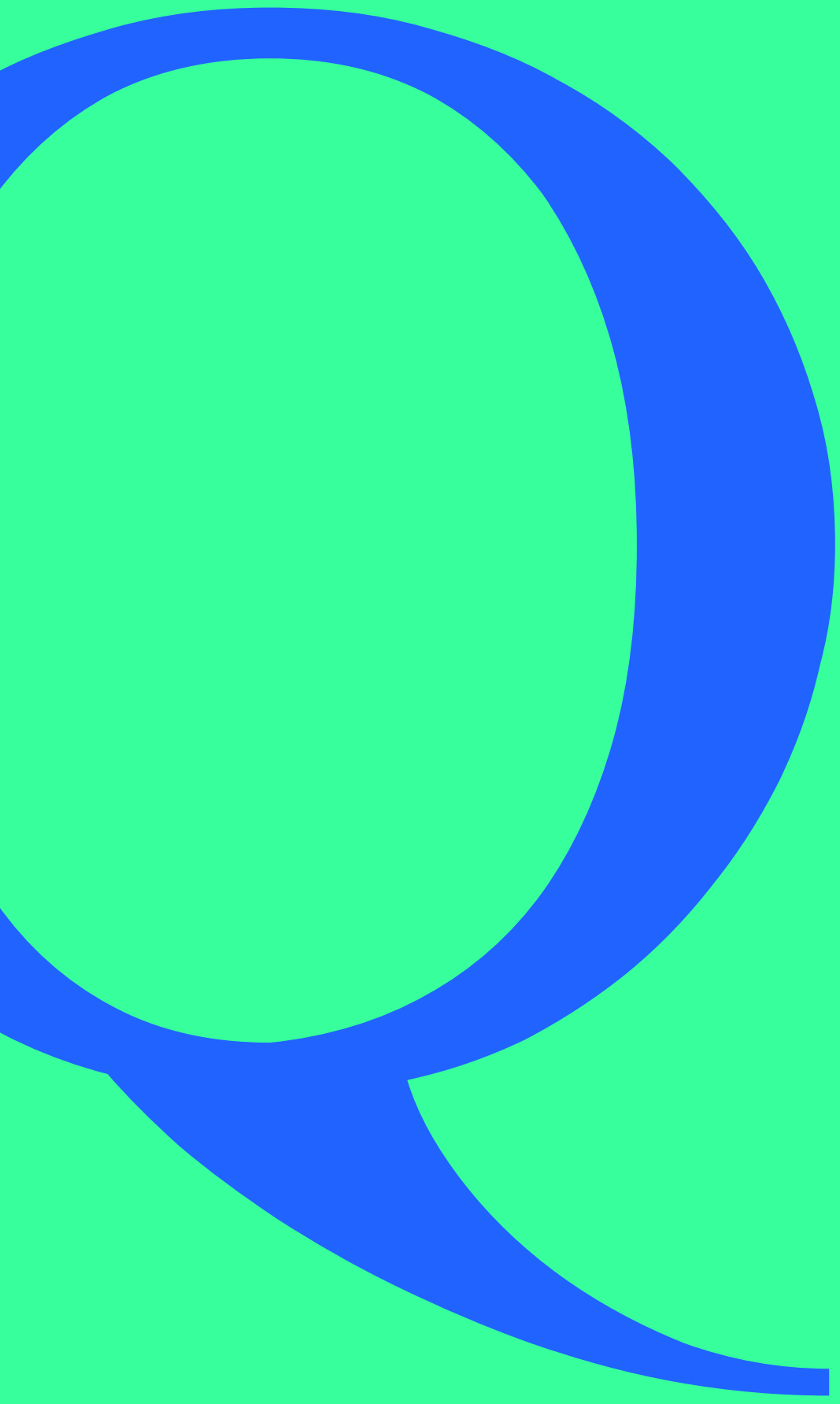

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