EULARIS

The Key Steps in Becoming a Data-Driven Pharmaceutical Company

Optimizing Success in the New Normal Using Big Data and Artificial Intelligence-Powered Analytics

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Seventy-five percent of pharmaceutical company executives interviewed believe that the industry is in the midst of a strategic crisis driven by price and cost pressures, regulatory changes, and expiring patents.In a perfect world, this tsunami of challenges would drive companies to rethink their business models to focus on health outcomes, reinvent their brands, and refocus their marketing with their customers firmly at the center. But how can this be done effectively?

The answer lies in becoming data-driven - intelligently.

The numbers for becoming data-driven from a recent McKinsey Institute survey are compelling: 23 times more likely to acquire new customers, 19 times more likely to be more profitable, and 6 times more likely to retain customers. These kind of results are driving many in senior management in pharma to aim at becoming data driven as an organization.

The numbers for becoming data-driven are compelling: ...23 times more likely to acquire new customers...

Unfortunately, too many pharmaceutical companies are still operating their marketing strategies on autopilot, paying lip service to the transformative changes occurring in the industry, and, in the process, failing to provide true value to their customers or shareholders. Which helps explain why, in the face of rising sales, profits have actually dropped over the past 10 years. Many in pharma have tried modifying their business models to produce products less exposed to research and development (R&D) and market risks, including generics, biosimilars, vaccines, over-the-counter medications, and medical technologies such as ingestible sensor chips, while cutting costs and payrolls. Such approaches may be helpful in the short and possibly mid-term, but to realize long-term sustainability companies need to turn their model upside down and move from a product-centric model to a customer-centric one driven by customer data.

If you are reading this, you either are somewhere on the journey to being data-driven, or are considering it. The number of big pharma who are not yet data-driven, and are still using the same information data systems as they have for the last 10-20 years are still in the majority. Most of these run various database systems, and can either query the system to produce excel spreadsheets or flat files. Then, the analytics teams attempt to integrate the various different systems data in their internal analyses, as this is still largely the only option currently available to them. Pulling static spreadsheets and flat files from numerous different vendor managed databases over months, is not being data-driven in today's world. Companies still in this space are in a very dangerous position competitively, as they are going to be left behind by more forward thinking companies. So, if you are still in this position, what are the steps required to achieve data driven nirvana? that truly addresses the needs

[1] McKinsey Commercial Capability Assessment Tool (CCAT), 10,000 respondents from 193 locations in six B2B sectors.

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STEP 1:
Know what you are aiming to achieve

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There are numerous reasons for becoming data-driven. Before attempting to solve your data silo issues to collate all your data into a central repository, the first step on the journey to becoming data-driven, is understanding what you are trying to achieve in doing so. We see many companies rushing to get all their data in one big central lake, or buying various big data implementations or tools, before really analyzing what their business needs are, and what solutions they should be looking for. There are many great tools out there, but before investing, understand what you need, and then find the right tools for that purpose, rather than choosing a tool and then retro-fitting your needs to the tool.

If you don't know where you want to go, how will you get there, and how will you know when you have?

Starting with a discrete and measurable objective is always a good first step. So many companies start with a fishing expedition to find interesting insights, and while a certain amount of exploration is good, wallowing around in data without an objective it is not a good starting point.

So, at a broad level, are you aiming to become data-driven in order to decrease inefficiency, increase customer engagement, increase sales, increase profitability, or something else more specifically brand related; such as increasing physician switch to your newer brand?

Next, create a well-defined list of your strategic reasons for becoming data driven. This will help you plan your data strategy more effectively creating quicker wins and more measurable results.

The next stage in this first step is to start to prioritize your use cases against which offer the highest value to the business. Simultaneously, do the same thing around your customers and their pain points to understand what would solve your customers' biggest challenges, while offering your customers the biggest value. Finding a place where these two lists intersect is an ideal sweet spot. If not, aim to balance short term value, with your long term vision, to ensure you reach your strategic objectives.

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STEP 2:
Access the right data

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We see a few issues around data fairly regularly with pharma. These largely fall into 2 challenges.

Where is your data coming from? What data are you collecting? And how are you using it to identify and communicate the value

Challenge 1: Rushing to combine all data quickly.

Bigger may not be better.

Recently a company asked us to combine all their data in all their brands in all their markets and have it ready to do AI analytics on it. If we were a tech company first, we would be very enthusiastic, but we do not recommend rushing into this step, unless you have a very clear business case for doing so – which some clients have had.

For example, having 'find new insights' as your business case, is not a solid first one, However, if you wish to combine all your data to create next best action modelling from several petabytes of relevant data for multiple brands, as we did with one client for their global digital team, this is a solid reason. Incidentally, that clients reports that the incremental sales gain from this across the brands using it was $4.55Bn as a result of the process. [Check out our case study on this project at the end of the white paper.]

But that business case aside, the reasons for reserve when companies without a business case wishing to combine all their data, ask for this, are that without strategic business goals for the process, this is going to be a very costly exercise and a wasteful one that is unlikely to gain the desired return required.

To collate data from all sources is relatively straightforward for big data engineers, and something we do constantly, but it is not quick and easy. The data has to be cleaned. Just uploading data into a system will mean it is full of errors (multiple instances of the same thing etc.) and if the data is full of errors, so will the results be. This means commercial and strategic goals will not be achieved. So, it has to be cleaned properly before ingesting, which is the job of a data scientist.

Following that, the ingestion sources for each data source must be created if you want different types of data correctly ingested and standardized, and this is the job of a big data engineer. Data ingestion set-up time varies by source but can be as quick as 2 days or as long as several weeks of big engineering time per source.

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That data ingestion also has to be secured and there are numerous processes for doing this but essentially they involve various double encryption of all data being transferred in or out of the system. Then the data security should be audited to the highest standards for security. Setting up these encryption processes also take time for each ingestion type. So, there is a process that takes both time and costly effort from skilled professionals.

Therefore, it is far more sensible to consider your strategic business goals, and divide these into priorities and then determine what data is most relevant for each of these goals. Take the data ingestion process as a step-wise one where a discrete business objective is identified, then the relevant data for that objective is identified, cleaned and ingested.

And this process does not mean that when the same data is used for a different strategic goal that you would be reinventing the wheel. Today, these projects can all scale upon each other so the data ingested for one project will be in a central repository and available for other future projects without any additional cost.

This approach means that you can build the data repository in smaller, manageable steps, and create quick financial wins with each smaller discrete project and build towards the goal of having all the data in one place, rather than rushing to do it all in one project.

Challenge 2: Difficulty in accessing their data.

The second challenge, is one that appears even in small discrete projects. For many pharma teams, one of the most difficult parts of this process appears to be around their data itself – knowing what data they already have, and importantly, how to access it.

In several marketing analytics projects with big pharma, we have found that the biggest issues in this area are that marketing teams often do not know what data the company actually has, nor what is in their databases (as they outsource them to a multitude of vendors), and if they do know, they do not know how to access it, nor who internally has access to it.

So, despite the majority of companies aiming to be data driven, most of these continue to keep data in various vendor-controlled silos due to the difficulty they find in collating all their data in one repository.

Yet collating it together has never been easier, or cheaper, given all the technology advances today. Legacy IT systems from both external vendors and internal systems hinder many data-driven projects and prevent the integration of silo-ed information. However, managing unstructured data is beyond the capability of traditional IT approaches.

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To fully solve this issue with all your data in all your operating countries can take years.

In fact, some pharma companies are doing this already as internal projects, but these have been significant projects taking around 4-5 years. This is admirable, but not necessary to do all at once.

Todays' systems are scalable so doing one project with a subset of data is not wasted as you can build on that and integrate more data as you go for future projects. We recommend this approach.

Prioritize projects and data required for those and clean and merge and get measurable results. After that, the next project can add to that data and build over time.

Pharma teams need to take back control of their data, away from vendor systems into an integrated repository.

Given that data is the lifeblood of the new economy, especially big data, pharma teams need to work now to take control of this issue, and this is the first step along the path of becoming a data driven organization.

Many vendor organizations are aware of this and are attempting to extend the use of their original specific-use-focused software systems, to offer data stores that they control and manage.

Pharma teams need to take back control of their data, away from different vendor systems, and into one integrated data repository – preferably their own cloud - that they can access 24/7 if they want to become a truly data-driven organization. And if you don't have an internal team who can create your own big data internal repository, we can also help there.

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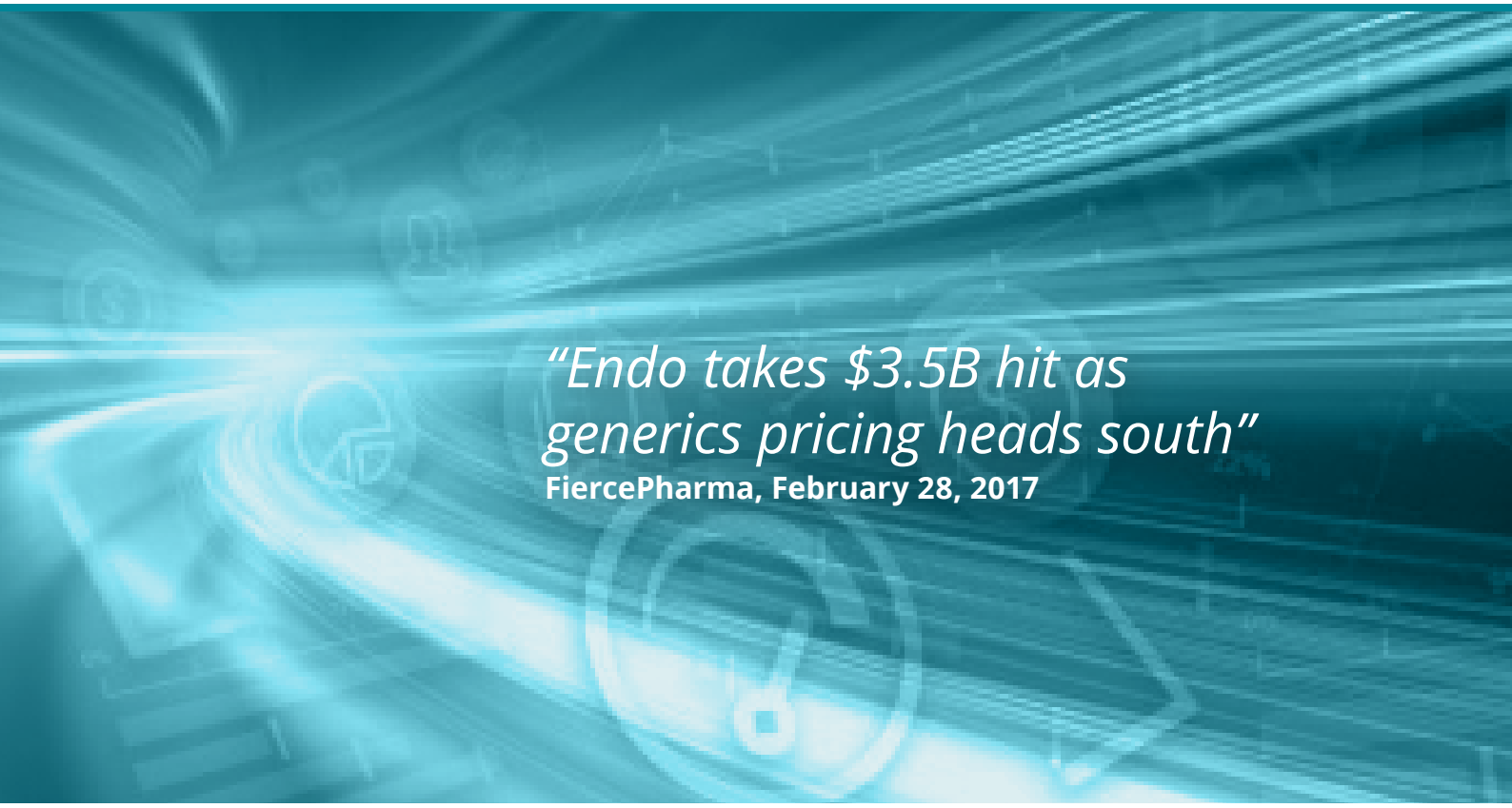

STEP 3:
Cleaning Your data

STEP 3: Cleaning your data

Everyone knows the saying *'Garbage in, Garbage out'.*

Nowhere is this more of a problem than in analytics. Dirty data is a massive problem. This contaminated data is an issue for most companies. Especially companies looking for an easy solution with big data and simply using existing vendor platforms to upload all data without cleaning.

Today you will have access to loads of public/open data as well as commercial databases available to use in analytics. It looks amazing when you examine all of the types of data available. For example, there are 85,000 databases alone at data.gov and these contain things such as healthcare, consumer, hospital discharges, home health patient outcomes, hospice data, DSH data, AHRQ data, etc. Also available are 1,330 databases on healthcare from dozens of sources at healthdata.gov and these include things such as hospital discharges by county, VA hospital compare, Medicare spending by patient, patient hospital experience, home health patient outcomes, DSH data, AHRQ data and more. You can also access data on 50 million Medicare patients and a lot more. Sounds like a data paradise compared to those in Japan, Europe and the rest of the world.

However, big is not always best. These databases are by no means comprehensive and usually the main use achievable from combining all this big data is forecasting; it is robust and good for that purpose. Nevertheless, for other analyses, the gaps and lack of data points in key areas can create very misleading conclusions, depending on what you are analysing.

We know a lot of this data is full of gaps, but we also know there is a lot of dirty data amongst it all...data that has been keyed in inaccurately can get lost in the sea of data.

What about the rest of the world? What data do we have there?

We have all the usual suspects; sales and market share data, promotional spend data, market research data, as well as a few other databases. In addition, even this small data can be dirty. The sales and market share data is typically taken from sample data and extrapolated. The promotional spend databases bought are almost always erroneous. How I know this is that every time we are given one of these by a client to use they say, "It is inaccurate for my brand so we need to change those figures." If it is inaccurate for one brand, chances are it is inaccurate for all.

Of course data is becoming more available globally now. In all countries from Japan to India to US to Europe we can get physician browsing data, medical claims data and in many places EHR data (certainly in Japan and UK and parts of US).

-- DANGER DANGER--

Although it is much easier to take a platform that has integration widgets available for various data types, and simply drag and drop to upload all data possible.

However, this approach will not be as successful as you hope.

Eularis was offered a trial on a leading AI platform. Ingestion widgets were available for several of our software systems plus spreadsheets, so it was point, click and upload. No data cleaning was offered so it was data uploads as they are. Then, you could input a question and visualization was available.

However, the results were disappointing. No new insights were available, and answers could not be found for our specific questions.

This experiment proved our approach with our clients was the right one to achieve solid real world financial results.

To achieve real results, start with a strategic question, find the relevant data (rather than any old data), clean it thoroughly, ingest it, create bespoke algorithms to answer your specific questions, and create visualizations that fit in the end-users day-to-day work life.

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Data quality is an industry-wide, global challenge in Pharma. I remember speaking with someone at Bayer in the US. They recognized this problem was so severe, they divided their analytics team into a data team, whose job it was to source and clean data, and a reporting team.

A famous example of such an error was the NASA Mars Climate Orbiter disaster where the $125 million piece of equipment was lost because one group of engineers used metric units and another used imperial units for a key operation.

Combining industry strategic expertise with big data and analytics expertise is critical for success.

Everyone will be familiar with the situation where you are preparing a presentation for senior management and something looks off with the numbers. You go and verify the numbers and find there is indeed an error. Most people routinely come across this issue and either correct it, or do not pick it up at all. A few studies have found that analytics teams spend around half of their time finding and fixing data errors.

Let's consider the issues with errors that creep in. In Pharma sales and marketing it can mean wasting resources on the wrong targets, inaccurate strategy or tactics leading to reduced revenue and profit. It is a huge problem in Pharma. What about in healthcare in general? It can be an even bigger problem. An incorrect result from a pathology test could kill a patient. The costs are huge in every possible way.

However, the solution is simple. Every team needs to ensure that the people working with the data are aware of potential issues, that they understand where errors could occur and know enough about the data they are using to be able to find and correct any issues uncovered.

If your data is unreliable, you will make inaccurate decisions and senior management will stop believing what you say. Everyone will fall back into using gut feel and intuition, and will be more likely to reject counterintuitive implications that arise from strong data and analyses. We all know the term 'garbage in, garbage out' which arose from bad quality data.

However, correcting the issue is not as insurmountable a task as you may imagine, and the solution is not a technological one. It is a communication solution.

Often errors occur because the user of the data does not fully understand the data and they assume things about it that are incorrect.

Alternatively, they might not understand it enough, so glaring errors are not picked up. Eularis are scrupulous about data quality as our reputation is on

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the line if we give bad results and, therefore, the data we use for our machine learning and other Artificial Intelligence powered analytics is as clean as possible. Eularis have a team who do this with every piece of data we collect. It adds costs to us but it must be done for us to be able to get good results for our clients.

Data has two critical moments in its life – when it is created and when it is used. The errors need to be fixed at the moment of creation, rather than the moment it is used.

In the majority of studies about data errors it has been found that most are not picked up until the data is used and makes no sense. Fixing the data should not only be about fixing others errors but equally about ensuring that those creating the data are error checking as they go along so that the root cause of errors is found immediately and eradicated.

Interestingly, when working on big data projects in the US, when we find data issues and contact the originators of the data, we hear something similar each time: "We didn't think anyone used the data so we didn't spend much time on it". It is very important that the companies responsible for compiling the data are aware that this is being used and errors are an issue that they need to address. This is the best way to correct the problem – at the source. Obviously, this is for the big, open datasets. With the data bought or collected, it must be checked as it comes in.

Once you understand how strategy fits in, you can move from basic implementation to real world success.

Often companies launch huge data cleaning efforts to clean their existing data.

This is good; however, a more efficient way would be to get the data cleaned at the source to identify and eliminate the data errors in the first place, saving a lot of time, money and effort.

Of course, it still needs to be checked when it reaches you, but doing this will reduce the clean-up effort dramatically.

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STEP 4:
Getting the right data, in a standardized format, in the same location

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You have your objective, you know what data is relevant, and it is clean.

Now, we need to put this in one location. Data ingestion and integration plays a critical role in this step.

Effectively integrating data can help teams become more informed, thereby allowing them to compete more effectively even as their operations, services and products continue to evolve.

The question that they must ask themselves, then, is how to best achieve data integration. This is not an easy matter, nor one to be brushed aside. On the contrary, acquiring and deploying the right tools and strategies will have a tremendous impact on a firm's overall ability to integrate, and therefore leverage, its data resources.

Pharma big data project failures are largely due to the lack of commercial strategic planning included.

And the other big question in pharma on this point is how to do this with the utmost security that allows you to be HIPPA compliant and achieve all data security standards required when in many cases, the data is sensitive (e.g. clinical trial data, claims data, EHR data etc.). Just uploading into any old platform you would be seriously in danger of falling foul of numerous security compliance areas.

This is something Eularis take very seriously to ensure we maintain the highest levels of data security within platforms and also for each data stream or batch going into and out of the platforms we work on. In fact, we have a team of data engineers who solely work on checking security of data ingestion for projects.

You can choose to either use an existing platform but our recommendation is always to ingest into your own server (cloud or otehrwise) as this way you control all the data. By moving data from a legacy vendor system to a big data vendor system, is still the same issue - you are not in control of your own data. If you need assistance in creating your own repository, Eularis can help, If you want to piggyback on ours (or a public cloud like AWS) but have an exclusive section that you alone have access to and control, that is also possible.

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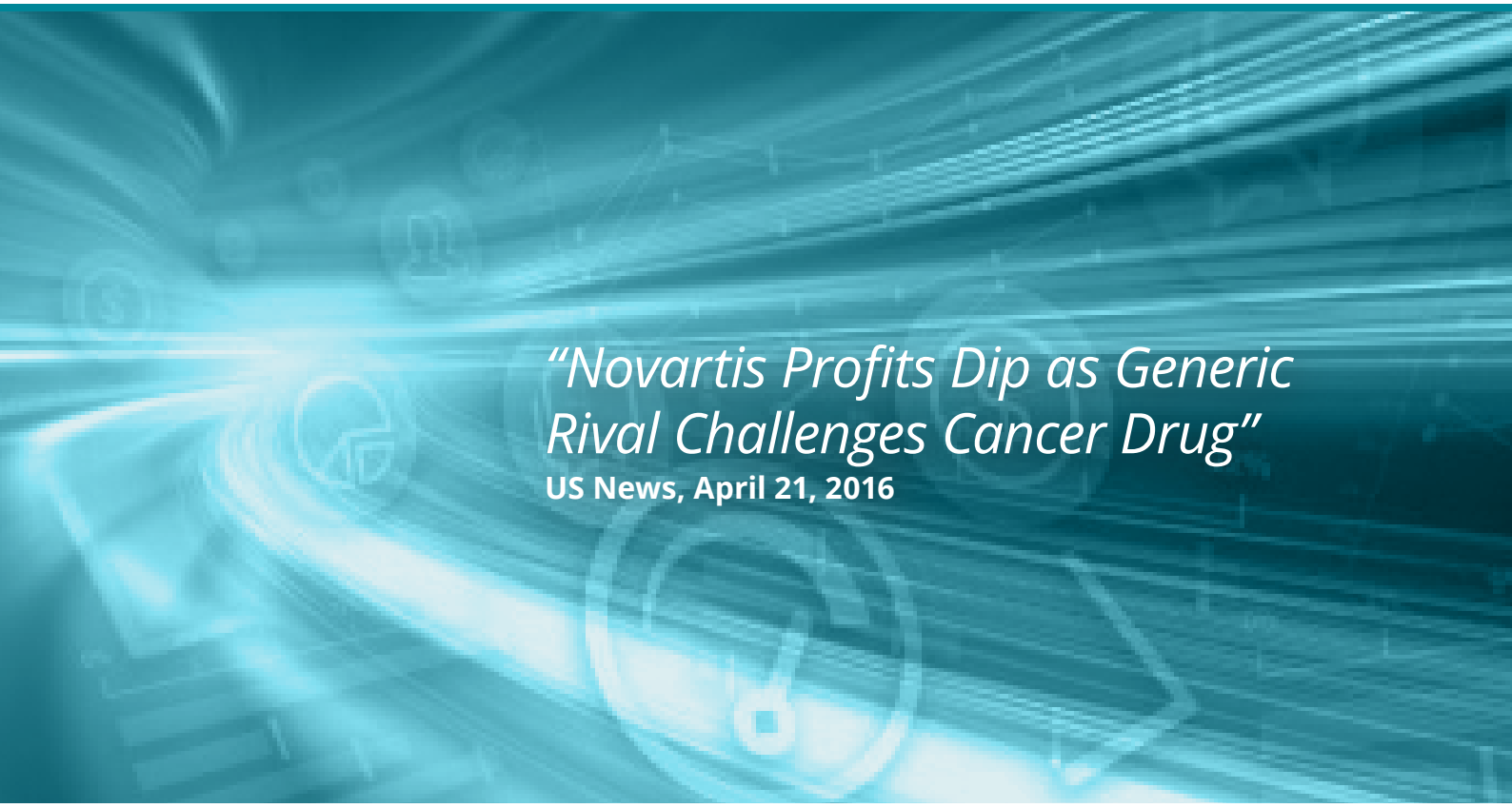
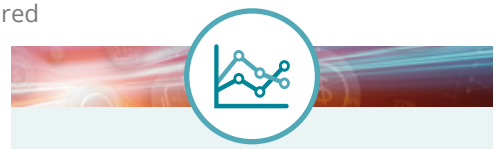


STEP 5:
Create the right algorithms for your specific challenges and data combinations

STEP 5: Create the right algorithms

The reason for doing everything you are, is to extract more valuable insights to lead to value for your company and your customer to empower your decision making – right? But if you are applying a ***one-size-fits-all*** approach to your data analytics, you are not going to achieve the outcomes you are aiming for. If you have done this and not achieved the outcome you wanted, it doesn't mean it is not possible – it just means you have made some errors in the approach. These could be either in not cleaning the data sufficiently, or not applying the best type of AI algorithms for the data sets and objectives (e.g. relying on existing 'fit everyone' platform algorithms), which will lead to erroneous insights and a lack of real value in the project. This is one I see regularly. Different data and different objectives require different algorithms. To provide an example, I was offered a trial of a leading tech company's AI platform. I tried it as we were redoing something for an internal project and we thought it may be interesting to see what it offered up. Sadly, nothing. It has connectors for a few data sources so we could upload the data straight from platforms into it, so no ingestion set-up needed, but the algorithms were clearly very standard and did not yield anything. On top of that, there was a spike in the data that looked interesting but because the data had not been cleaned, nor the algorithms created for it, we were unable to determine what it was depicting. So simply uploading data into a platform and applying whatever algorithms exist in the platform already, is unlikely to yield a strong result. People who are not mathematicians often do not understand this but to put it simply, if you are trying to find your way somewhere, you need to take the right roads. Sure, if you have no road to begin with, building a road is a great first step but an insufficient one. Just driving aimlessly on any old road without a destination, or a map or sat nav, will not get you where you are hoping. It is the same in this. Without applying the right algorithms to the data to achieve your goal, you will simply be getting roads to follow that do not yield what you are looking for. You might have fun on the travel but it will not get you where you should be in terms of results. Underestimating the data science skills and expertise required for this is one of the challenges many companies face.



*Applying the same algorithms for all data and problems does **not** create a competitive advantage.*

The challenge for many companies embarking on hiring data scientists is an inability to know whether the candidates are strong or not. A PhD and relevant experience does not necessarily make you a strong candidate. You need good data scientists and these to write the best algorithms specifically for your data sets and objectives. Eularis interview over 50 data scientists every month as we are constantly looking for the best and brightest. 95% of these are rejected once our highly experienced data science team examine their code samples. Two recent studies from Gartner showed that 83% of organizations were unable to find the data scientist skills required to implement their projects. There is a shortage of good data scientists and not any data scientist makes a competent one for your needs.

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STEP 6:
Creating interfaces for the analyses that fit in with the goals and end-users daily work

STEP 6: Creating interfaces for the analyses that fit in with the goals and end users daily work.

Without ensuring in your initial strategy that the output and content of these analytics is embedded into how the end user works, it would be pointless doing them.

If they are not in sync with the day-to-day business and decisions being made, they can make the end user feel like this is yet another thing they need to add to their 'to do' list.

The point of these is to empower the end users to take the pain out of their decisions and allow actions that they know with certainty will achieve their goals.

In the early phases of a project it is critical to include the end users to ensure that they have input into what they need to be created to assist them with the job. The outputs need to be designed with these end users in mind, and how they will be used to achieve the original objective successfully.

In addition, you need strategists and analysts who can assist the end users as to how to utilize the insights and opportunities found and implement them in the most practical and effective way.

Ensuring you create the analytics to fit in with the end user is critical for success.

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STEP 7:
Embed within your organizational culture

STEP 7: Embed within your organizational culture

Finding ongoing success with being data-driven means embedding it into the culture of the organization to gain a competitive advantage and bring more value to the customers.

Ultimately the aim of this is to set the data free to allow all teams to make use of it rather than waiting for flat files to come from a business query that takes days to weeks to months to access and is confined to one or two in the IT teams.

It is important for everyone in the organization to understand that without data, they are just another person with an opinion.

The data and analytics provides unparalleled value in guiding decision making based on evidence and real world data rather than just gut feel and a narrow band of data.

Analytics is the biggest game-changing opportunity for marketing and sales since the Internet

Once some teams start using it and getting better results than other teams, there should be a way to share these internally to help other teams see that this is a strong way to solve their challenges also. When the teams start to realize how complete a view of their customers and business this type of thing provides, they will start to champion the data-driven culture being created.

Eularis always start our client big data projects with a discovery process that plans and brings clarity to your big data strategy.

Our pharma strategy team will examine the current business situational challenges and objectives, while our data scientists will examine samples of the data available to understand the structure, cleanliness, relevance and usability of it.

Following that, together with our client teams, we establish a roadmap of the high value use cases to assist in achieving the business objectives using big data and AI effectively. This helps our clients achieve a clear vision of what is possible with their data that will achieve specific business goals, and how to achieve it with a clear roadmap that defines goals for technology adoption, implementation and operation to do so.

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BEFORE EULARIS DISCOVERY PROCESS

- No clear business case about where the best opportunities lie
- Lack of direction and commercial strategy for data
- Unsure of big data technology options relevant for pharma
- Less skills to implement so utilize generalist big data companies
- Slower due to less complete picture in understanding customers' needs and business value drivers

AFTER EULARIS DISCOVERY PROCESS

- Understanding your key challenges, data sets, options and benefits of a big data strategy
- Clear strategy with clearly defined short and long term goals aligned with business objectives
- Results driven roadmap with prioritized use cases, with highest value opportunities identified and an understanding of how to generate faster returns
- Upskilled team
- A full understanding of what is required to develop the necessary architecture for the business needs and create an implementation plan

Conclusion

The process to become data driven does not happen over-night but clearly making the change and becoming data driven as a company will infuse evidence-based decision making and create a much higher performing organization.

There are a lot of steps involved but the hard work pays off, especially in dynamic changing environments, as the teams can know what to do confidently to stay competitive. And you do not have to do it all at once. Start small with a discrete project for one brand team, then build from the results gained.

Eularis do these projects constantly and have come across most challenges pharma teams face and can assist them overcome these to make the process smooth and successfully achieve your business goals.

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Eularis Case Study: Digital Transformation Results in $4.55Bn in Incremental Sales for Client Company

Data integrated and AI algorithms applied for leading brands and countries resulted in significant incremental growth.

Eularis was approached by a new Global Digital Lead for a leading Pharmaceutical company. They deployed a wide range of customer engagement activities, including both direct sales and communication, via a number of digital channels. However, the company digital team had examined the customer engagement and found it to be lacking. They had a vision of full integration and automation of all data and decisions.

They had around 10 core data platforms that were used in all markets (including CRM, social media listening data, web marketing automation etc), as well as various other data that they also wanted incorporated as well as individual Rx prescribing data, IOT sensor data, ATU data, patient support program data, call centre data and more. The team wanted the data integrated so that they could create greater engagement with their various customer groups and leverage that to create faster adoption and retention of the company brands, ultimately creating operational efficiency and faster revenue growth.

Eularis created a strategic plan that included what could be achieved from applying AI to the data for the various teams, as well as an IT infrastructure platform that allowed data to be ingested from all data platforms (including structured e.g. spreadsheet, unstructured data (e.g. video, text), and semi-structured data) into an integrated uniform format. A temporal

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element was added via a complex event processor to ensure all sequences of interactions were understood so that these could be linked to ultimate events (engagement, prescribing, etc.).

Various other IT infrastructure elements were also created to ensure that data was properly, and securely, processed. Thereafter, Eularis created bespoke AI powered algorithms for the various data combinations ingested, and the specific challenge to be solved, and designed output screens that integrated into a variety of platforms to help the sales and marketing teams use the data in their day-to-day work lives to achieve stronger results.

The algorithms were fed into various systems including:

- Bespoke dashboards that gave marketers the pulse of the business so they could see an overview of what was happening in all areas.
- A CRM system to offer detailed information so the sales rep had information on each individual physician at their fingertips, determined by AI algorithms on the data so that
- they knew what message the physician needed to hear at that specific time, in order to gain more commitment for prescribing the drug brand being detailed,
- bespoke detail aids were created on the fly for the individual physicians needs in order to maximize the results for that physician
- predictions about what the physician was likely to do in terms of switching to or from our brand were accessible.
- Web marketing automation software so that the software could be programmed to deliver next best content, in the right sequence and right channel at the right time to each individual customer.

The project took time to connect all the platforms, in the markets included in this first part of the project, but the return on investment for the project has been exceptional so far. The Digital team report that not only has the process made the sales and marketing teams lives much easier, but the incremental financial gains from the implementation have been recorded as $4.55Bn to date.

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About the author

About Eularis

ABOUT THE AUTHOR

Dr Andrée Bates

Dr. Andrée Bates is a pharmaceutical industry veteran with 30 years in the industry and 20 years working specifically in pharma AI. She brings blended expertise in Artificial Intelligence (AI), Pharmaceuticals, and Strategy. Dr. Bates has led Artificial Intelligence powered projects for numerous top-tier pharmaceutical companies in diverse areas such as clinical trials and R&D, market access, regulatory, medical affairs, and sales and marketing. These have all resulted in measurable growth in revenue, profit, and market share for her clients. Having worked in the pharmaceutical industry since 1993, and AI in Pharma since 2003, she has a detailed understanding of the pharmaceutical environment and how AI can be leveraged compliantly and effectively. She has authored many articles in peer-reviewed journals and industry reports. She has also been a guest lecturer on Healthcare Innovation and AI in multiple university MBA programs: INSEAD Business School (Fontainebleau), the Erivan K Haub School of Business at St Joseph's University (Pennsylvania), Fordham University (New York) Global Healthcare Innovation Management postgraduate program, and Bayes Business School (Formerly Cass Business School – The University of London), and she lectures on AI for Boards at Henley Business School at the University of Reading, as well being a guest speaker in numerous internal pharmaceutical company meetings and international conferences in UK, USA, Latin America, Canada, France, Germany, Spain, Hungry, Poland, Japan, China, Singapore, and Australia.

About Eularis

Eularis exist to help biopharma and healthcare commercial teams who want to weave FutureTech like Artificial Intelligence (AI) and Machine Learning (ML) and Virtual Reality (VR) and Augmented Reality (AR) and Internet of Things (IOT) to solve their challenges and deliver unprecedented measurable results.

The Eularis team of experts have extensive qualifications combined with many years of real-world experience in both biopharma and AI companies. The mix of qualifications (MD, PhD, MBA, M. Sc., M Engineer.) along with prior experience in executive-level positions in top 20 pharmaceutical companies ensures our clients have the right strategic and tactical questions solved and planned with cutting edge technology and AI. You have access to Pharma AI Futurists, Pharma Board level team, and AI Strategists, and Data Scientists and Big Data Engineers and Developers to ensure you are playing at the top of your game.

Every project is unique and begin by developing a deep understanding of your strategic needs and your data. Then, we plan the right approach to meet your strategic needs and transform your performance.

Learn more
eularis.com

TRY ONE OF OUR CORE SERVICES

1 AI STRATEGIC BLUEPRINT

Give us your most difficult challenges to solve with AI and FutureTech!

The problem of poor AI impact comes down to a lack of strategy and pre-strategy. We know AI is impressive, and we see the results all around us. So why do many pharma AI project never pass the pilot stage? There is a plethora of evidence as to why not having a strategic AI blueprint before you begin is problematic and leads to project failure. We create strategic AI blueprints to ensure all AI projects meet the company's strategic objectives and move the needle for maximum impact.

2 AI DEPLOYMENT BLUEPRINT

Ensuring the key foundational elements required for success in your AI FutureTech projects are in place.

In the pharma environment, we face unique challenges. Knowing where you want to go is one thing, but the trap many then fall into is ensuring that the key foundational elements are in place (e.g., finding the right data, getting through internal legal and compliance, buy vs build, tech planning SOW, choosing the optimal AI vendor etc.) so that you can execute quickly. Our deployment blueprint accelerates your ability to industrialise the opportunity effectively by taking care of all these foundation pieces enabling you to easily commercialize the most effective solutions rapidly and seamlessly.

3 AI MODEL IMPLEMENTATION & TECH BUILD

End-to-end solutions focused AI and tech implementation

Tech implementation from end-to-end including tech project planning, implementing security procedures, data discovery, data staging, data preparation, data AI modelling (with ML, NLP, Generative AI etc) model evaluation, UI/UX creation, integration services, software integration and cloud services, perform testing and quality controls and launch.

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