

Ask Mr Sid

Dear Mr Sid

Re: Too Much Data About Data

It seems that all the talk these days is about data.

Sure, data is important. I get enough good, timely and adequate data to be able to make informed decisions in the boardroom. As a non-executive director, isn't that all that should matter to me?

For starters, the listed company of which I am a board member is in the hospitality industry. We own a chain of restaurants, and the main concern is to provide quality affordable fare. We may use data to keep track of our restaurants' sales performance, but we are not a technology firm.

So, I don't know why we have to get into the deep end about what kind of data the company has, and how it stores and processes them. We hire a bunch of technology specialists to deal with such matters.

Even so, we're overwhelmed by data issues. We keep hearing about the new data rules and regulations. And privacy concerns. And data breaches. And cyber security. I forgot

what PDPA stands for, but it hangs over us like a sword.

Virtually all of us directors really don't know our zettabytes from our troglodytes. We come from an age when data was what's in the phone book. It's just not practical or possible for the board to even try to keep up with the technology and laws around data.

Of course, we understand that our customer data has some value and needs to be protected, but the tech team take cares of it. They submit regular audit reports and seem to have it under control. We have not experienced any cyber attacks or hacking incidents. So, what's the big fuss about "Big Data"?

Mr Sid, is this something we need to worry about, any more than what we already do?

Yours sincerely

No-More-Data-Please

Dear No-More-Data-Please

While I understand the topic may fatigue you, data is a rapidly evolving area with grave impact on companies in so many ways.

There are, of course, different types of data. It could simply be the information you are provided with in the boardroom to help you and your fellow directors make decisions.

Today, however, data is defined more broadly. Often, it refers to computer data which is information that's captured, stored and processed electronically. It's the growth of such data that has led it to being called "Big Data".

Consider this:

- A zettabyte is a measure of storage capacity and is 1021 (1,000,000,000,000,000,000) bytes or 1 sextillion bytes. Imagine, if each gigabyte in a zettabyte were a brick, 258 Great Walls of China could be built.
- Data growth has been exponential. Experts estimate that the global datasphere, defined as the total data created, captured and replicated globally, reached 33 zettabytes in 2018, and will reach 175 zettabytes by 2025.
- A host of factors are causing this data growth: increasing internet and mobile usage, prevalence of Internet of Things, cloud computing backed by data centres,

and increase in virtual and augmented reality traffic. The imminent adoption of 5G cellular network technology will further drive such growth.

Sorry to provide you more data about data, but yes, the unabated growth of everything "data" in the digital economy is capturing attention. And for good reason: it creates boundless opportunities, but there are also significant challenges.

Opportunity

The value of data, as you have pointed out, is that it informs decision making.

The massive amounts of data now available means that the quality of decision making can be considerably enhanced, especially if the data is harnessed in ways not possible before.

What differentiates big data from the "regular data" you have been analysing to date are the tools used to collect, store and analyse the data in its increased volume and complexity. These tools include artificial intelligence (especially machine learning), data management, data mining, text mining, data analytics and Hadoop.

Even though you are not a technology company, you can avail yourself of such tools to collect and mine the considerable data

you have (and can have) about, say, your customers' spending patterns, and suppliers in your restaurant business.

In the past, sales forecasting was based primarily on metrics such as customer demographics, or past sales performances. With data analytics, you can better profile your customers and their tastes to inform your marketing campaigns, and configure your operations to suit and target different types of sales (takeaways vs catering vs premise sales, and food types).

You could also have a greater understanding of your suppliers' performances at a more granular level, which might lead to greater operational efficiency and cost savings on the part of many other businesses.

In other words, the possibilities for new uses of data are as manifold as the new recipes you can conjure up in your restaurants.

Challenges

The challenge of big data though, as you pointed out, is that there's too much of it. Hence the need for sophisticated tools to help sort through them. But data tools and storage are not cheap, and sorting through the complexities is not easy.

So, the first decision you need to make is what and how much of the data to capture and store before high quality research can begin. This is a matter on which the board should help set the direction.

A greater concern would be data security. Data breach and abuse are costly, not just in terms of the cost of fixing them and disruption to operations, but also in reputational damage.

And in today's world, cyber attacks are routine. You may think you have not been hacked, but the cyber security experts will tell you that your company has likely already been breached – you just don't know about it. IBM's research indicates that the average time between a breach and detection is over 200 days.

With privacy and confidentiality concerns, there are now legal requirements for the protection of personal data across the world. In Singapore, the primary legislation ensuring this is the PDPA (it stands for "Personal Data Protection Act"). But it's not the only legislation on data protection. The obligations of organisations for data protection are also set out in the Computer Misuse Act, Cybersecurity Act, Spam Control Act, Protection from Online Falsehoods and Manipulation Act and Banking Act, to name a few.

Role of the board

In the face of the prevalence of big data and its significant benefits and challenges to the organisation, it would be hard for you and the board to take a minimalist approach to data governance and use.

Data governance is the overarching strategy to ensure that the data the company has and uses is clean, accurate, usable and secure. This includes the proper management and ethical use of the data. And these are not just technical issues; they also impact and involve the business.

Yes, data governance and usage are jobs for management, but as the governing body of the company, the board has the duty to oversee it. Some questions you should be asking management are:

- Does the company have the skills and capabilities to deal with big data?
- Is the organisation complying with all the relevant laws, especially on data protection?
- How is the organisation managing security risks?
- What are the business opportunities afforded by big data, and how are these being progressed?
- What is the return on investment on big data?

To be effective in overseeing management, the board itself needs to understand big data, and set the tone for its protection and exploitation for business benefit.

Towards this end, the board should first upgrade directors' understanding and skills in technology and data. Some boards explicitly ensure that there are digital directors on the board, and form technology advisory panels.

The board should also look for opportunities to use big data in its decision making. You can, for example, use big-data visualisation technologies to make key governance decisions.

If it's any consolation, the data suggests that the majority of directors have yet to fully appreciate the importance of data governance and its link to good and effective corporate governance. You can be ahead of the curve if you choose to.

Yours sincerely



Mr Sid ■

Who is Mr Sid?



Mr Sid is a meek, mild-mannered geek who resides in the deep recesses of the reference archives of the Singapore Institute of Directors.

Burrowed among his favourite *Corporate Governance Guides for Boards in Singapore*, he relishes answering members' questions on corporate governance and directorship matters. But when the questions are too difficult, he transforms into Super SID, and flies out to his super network of boardroom *kakis* to find the answers.

Mr Sid's References (for this question)

Audit Committee Guide

Section 6.5: Data Analytics

Boardroom Matters

Vol 1, Chapter 13: "Board Alert for the Personal Data Protection Act" by Yeoh Oon Jin

Vol 1, Chapter 14: "Data Protection: Turning Compliance into Opportunity" by Lyn Boxall

Vol 2, Chapter 30: "Safeguarding Businesses from Digital Threats" by Yeoh Oon Jin

"Data Protecting – Taking the 'It Will Happen' Approach" by Lyn Boxall

SID Directors Bulletin

2016 Q3: "Digital Directors, Get on Board" by Audrey Tan

2016 Q4: "Seizing the Cyber Security Challenge with Data Stewardship" by Siobhan Gorman

SID Courses

Business Future Series 1: Disruptive Technologies for Directors

Business Future Series 2: Cyber Security for Directors