

Singapore Management University

## Institutional Knowledge at Singapore Management University

---

Perspectives@SMU

Centre for Management Practice

---

4-2019

### Angry Birds fly high again with data analytics

Singapore Management University

Follow this and additional works at: <https://ink.library.smu.edu.sg/pers>



Part of the [Categorical Data Analysis Commons](#), and the [Management Sciences and Quantitative Methods Commons](#)

---

#### Citation

Singapore Management University. Angry Birds fly high again with data analytics. (2019).  
Available at: <https://ink.library.smu.edu.sg/pers/492>

This Magazine Article is brought to you for free and open access by the Centre for Management Practice at Institutional Knowledge at Singapore Management University. It has been accepted for inclusion in Perspectives@SMU by an authorized administrator of Institutional Knowledge at Singapore Management University. For more information, please email [cherylds@smu.edu.sg](mailto:cherylds@smu.edu.sg).

# Angry Birds fly high again with data analytics

30 Apr 2019

This article is republished with permission from [BusinessThink at UNSW Business School](#). You can access the original article [here](#).

*User feedback has transformed Rovio's culture and game design*

When Finnish gaming company Rovio Entertainment implemented data analytics as a key enabler of a new business model, they may not have expected it would also be the catalyst for a cultural transformation.

Rovio, which is best known in the gaming world for its Angry Birds game, was changing its business model as a result of industry disruption.

Angry Birds had been launched under the older 'pay to play' business model, but the explosion in the use of smartphones and social media platforms had given rise to a new business model known as 'freemium' or 'free to play'.

By 2016, 97 percent of mobile gaming revenue came from this freemium model, with monetisation of the game through in-game micro purchases such as the sale of virtual goods, or from in-game advertising.

In an industry that is estimated to reach US\$65 billion in revenue by 2020, there were strong incentives for Rovio to change, and in this transformation a key tool was the implementation of data analytics.

"The impact of big data on the creative industries is relatively under researched, so Rovio is an interesting example of how data mixes with creativity and intuition," says **Yenni Tim**, a lecturer in the school of information systems and technology management at UNSW Business School.

With research colleagues Shan-Ling Pan and Toomas Tamm from UNSW Business School, and Petri Hallikainen from University of Sydney, Tim has a forthcoming paper that looks at Rovio as a case study in "actualising business analytics for organisational transformation".

The aim is to understand how business analytics can drive value creation in organisations.

## DATA DRIVEN DESIGN

The research is based not just on an analysis of the steps Rovio took to implement data to drive its transformation, but also with qualitative interviews with Rovio staff that underlined the strong impact the data implementation had on the company's culture.

Much of this was presented in the official documents Rovio released as part of its initial public offering (IPO), which emphasised the strong competitive advantage the company had developed through the use of data analytics.

The researchers were also given access to Rovio employees, and more than 12 hours of interviews were conducted at Rovio's headquarters located in Espoo, Finland, with employees across a broad variety of roles and at different levels in the organisation.

What emerged for the researchers was a model that can also inform companies working in other industry sectors seeking to use business analytics to transform.

The Rovio case shows that analytics can only be successful where the insights are acted on not just to change the business model, but also to change the way the organisation interacts with itself.

It is a view that has been corroborated by other research. One of the first major studies of 'data driven design' was carried out in 2011 by a team led by Erik Brynjolfsson at the Massachusetts Institute of Technology.

From studying the business practices and information technology investments of 179 publicly listed firms, the research found those that had adopted data driven design had outputs and productivity between five percent and six percent higher than those firms which had not.

Beyond that, data driven design also had a positive impact on other areas of performance such as asset utilisation, return on equity and market value. In 2014, Nucleus Research claimed that for every \$1 spent on data analytics, \$13.01 of value was created, up from \$10.66 in 2011.

## CULTURAL CHANGE

At Rovio, the cultural change came from moving from a company where game features were being perfected and released in to the market as a complete or finalised product, to one where analytics sought and processed the opinions of customers, whose feedback then guided game design and development in response.

This was facilitated through a cloud-based platform and an analytics engine powered by machine learning.

"Rovio was known as a company which made premium games and this worked well and helped them establish the company," says Tim.

"But when freemium came along and changed the industry, their business model came under pressure and they understood they needed to change.

"When you try to engage users and make them pay you really have to understand them, so that requires analytics to tell you how long they play, how long they stay in a particular level of the game, and all this data was collected so that Rovio could understand its users and design its monetisation strategy."

The data not only helped monetise the game in the context of the freemium model, but it improved the game experience for customers.

This was because instead of relying on designers' instinct, Rovio's design process was driven by the feedback collected in the data.

"This created a different mindset," says Tim. "Because the data was telling them something they wouldn't have known otherwise."

## MIXED ROLES

It was an exercise that also democratised the use of data within the company and changed the way teams were structured.

Previously, Rovio was divided into teams of designers and developers, but through the use of data the company understood the benefits of transparency which then helped created hybrid team structures where the roles were mixed.

"This had the benefit of sharing data and communicating better within small teams, where people were able to understand all aspects of the process of creating the game," says Tim.

The interviews showed that this cultural shift required some change management within the company. Some of the designers were initially challenged by a way of working that was based on data insights, while data transparency was also a new thing for many.

"But in time the transition was successful, and Rovio went to the market in an IPO not as a mobile gaming company, but as an entertainment company," says Tim.

*Follow us on Twitter (@sgsmuperspectiv) or like us on Facebook (<https://www.facebook.com/PerspectivesAtSMU>)*