

The State of Virtual Reality in Canada

Pulse on VR: Situation Analysis Q1 2017

Key Takeaways:

In the first quarter of 2017, the VR industry (in Canada and everywhere else) remains a nascent sector. The hype has begun to subside and real data is beginning to emerge. As it does so, we see a number of key points:

- Sales performance is stronger for lower-cost platforms, but mainstream adoption seems beyond the immediate horizon;
- Investments in VR, though strong in 2016, have begun to stabilize;
- Much of the investment in VR is being made by platforms and manufacturers seeking a killer app. Most VR companies in Canada are making some form of content or application;
- A VR industry rooted in reality, not potential, presents an opportunity for the companies that comprise Canada's VR industry;
- Much of that opportunity rests in the availability of timely information about this rapidly-evolving industry – such as from *Pulse on VR*;
- Companies also need access to sufficient talent and funding to seize those opportunities.

Augmented and Virtual Reality (AR and VR, respectively) have the potential to become the next evolution of how we interact with technology. Similar to the evolution of personal computers, game consoles and smartphones in the computing sector, AR/VR has the potential to create new markets and disrupt existing industries.

VR Sales: Real, Mixed Results

But just how real is this potential? What do the initial sales figures tell us about the reality of VR?

As laid out in the following table, sales figures have started to provide more about how quickly VR is being adopted into the “mainstream.”

Headset	Cost	Other Cost	Sales (as of Feb 26, 2017)	Potential Community
Samsung Gear	\$99	\$600+	5,000,000	> 26 million Galaxy S5 – S7
HTC Vive	\$799	\$1000+ for PC	420,000	125 million active STEAM users
Oculus Rift w/ Touch	\$598 (as of yesterday)	\$1000+ for PC	243,000	
Sony VR	\$500	\$260 for PS4	915,000	50 million PS4 users
Google Daydream	\$79	\$649	216,000 (2016)	4 million Pixel (as of Jan 2017)

On one hand, some figures are promising. For example, Sony surprised many with robust figures attributed to its sale of 915,000 PSVR headsets in four months, while Samsung stood by their assertion that 5 million headsets were shipped in early 2017. At the same time, numbers for the premium headsets were somewhat less promising. HTC sold less than 500,000 Vive units and Oculus sold an estimated 243,000 Rifts.

In short, while the lower cost and bundled headsets are selling, we have yet to see meaningful adoption.

The VR “Stack”

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Top-line sales figures, however, don't tell the whole story of VR. Rather, one must dig deeper into how VR products are made to understand how the industry is developing. To that end, the VR ecosystem can be broadly structured around the "stack" of interrelated components illustrated to the right □

Hardware, the bottom layer of the VR stack, is dominated by larger players (e.g. Samsung, HTC) and is shaped by significant investments in VR headsets and specific enabling solutions (e.g. capture, tracking). 2016 marked a turning point for the industry as leading hardware companies met a number of product milestones from the launch of PlayStation VR, Google's Daydream platform and Oculus Touch motion controllers to Microsoft's announcement that Holographic VR headsets will be coming soon on the Windows platform.

While innovation is accelerating across the stack, opportunities to build new and fast-growing businesses are concentrated at the top of the VR stack, in content and applications. The VR platforms and manufacturers are funding the development of content they hope will help to stimulate broad adoption of VR – the elusive "killer app." Moreover, an increasing number of startups are exploring opportunities in software and content, areas where the platforms (e.g. Oculus) and manufacturers (e.g. Samsung) do not have the expertise to build competitive products/services

Content and
applications delivered
to end customers

Software enablers
(e.g. analytics tools)

Hardware (e.g.
headsets,
accessories)

Investments in VR: VR Content is King?

Major VR platforms (e.g., Oculus, HTC, Samsung etc.) continue to make content investments to expand their launch catalogues, and strategic and corporate investors like Twentieth Century Fox who invested in 2016 in content studios with strong technology IP.

A select number of these investments are outlined in the following table:

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Company	Product/Service	Investors	Investment \$\$
NextVR	Live streaming	Time Warner, Comcast Ventures, RSE ventures, Madison Square Gardens, and more	Series A \$30.5 million
Baobab Studios	Content Studio (animation)	Horizons Ventures, Twentieth Century Fox, Evolution Media Partners (backed by TPG and CAA), and more	Series B \$25 million
Felix & Paul	Content Studio + Technology Infrastructure	Comcast Ventures, LDV Partners, Phi Group, Caisse de dépôt et placement du Québec	Series A \$6.8 million
Vertebrae	Adtech	N/A	\$10 million
Big Screen	Social productivity app	Andreessen Horowitz, True Ventures, Presence Capital, Ludlow Ventures, David Bettner and SV Angel	\$3 million


As 2016 drew to a close, investments in content studios made way for notable investments in B2B companies focused on sectors outside of entertainment, including Andreessen Horowitz' VR investment in social productivity app Big Screen. By Q1 2017, however, according to Crunchbase data, both the number of financings and total capital investments in AR/VR slowed down¹. In effect, investors' overall opinion of VR has shifted recently despite simultaneous shows of confidence such as notable investments in Google's acquisition of Owlchemy Labs.

Reality as an Opportunity

Even if the VR industry finds itself in the Gartner-coined "trough of disillusionment" a drop in public expectations and investor confidence should not be cause for dismay². Rather, the slowing of the hype cycle creates space to intentionally design the

¹ Joanna Glasner. (2017) "Despite Hype, VR Investment Fades In Q1 2017." Crunch Database. Retrieved from: <http://about.crunchbase.com/news/despite-hype-vr-investment-fades-q1-2017/>

² Gartner. (2017) "Gartner Hype Cycle: Interpreting Technology Hype." Retrieved from: <http://www.gartner.com/technology/research/methodologies/hype-cycle.jsp>



foundations for the measured and thoughtful growth of this emerging industry. This development is good news for Canada, a source of both public support and significant talent that is positioned to stake a claim in this growing industry.

In order to take advantage of this opportunity, companies will need to have an accurate picture of the current Canadian landscape. We also need to track the evolution and growth of VR while providing the right incentives as the VR market reaches maturity in the next two to five years.

It is for this reason that Pulse on VR was launched to present an ongoing snapshot of the Canadian VR ecosystem as it evolves. Every quarter starting Q1 2017, Pulse on VR will present data gathered from our survey of the VR ecosystem and the workflows, tools, challenges and opportunities that face the creators and technologists working in it. This continuing project is motivated by a desire to better understand how VR experiences are created and distributed (the workflow) and which technologies are most prevalent among companies.

Pulse on VR also sheds light on VR's market potential including the challenges and opportunities companies are identifying as they attempt to seize the potential of this potentially transformative medium and shape the future of the VR ecosystem.

Pulse on VR presents information from jurisdictions across Canada – specifically Ontario, Québec, Manitoba, Alberta, and British Columbia – with additional insights gathered from California. This work is intended to benefit companies, funders, investors and content creators working in VR that are seeking to understand where they fit into the ecosystem and how VR workflows apply to their projects.


State of the Canadian Ecosystem

A sizeable majority (84%) of Canadian VR companies are focused on building VR content and/or applications. Canada's strengths in film, game development and visual effects have made it one of the prime hubs for VR content creation and application development. Canadian VR content and application companies such as Felix & Paul Studios, Secret Location (acquired by eOne), Liquid Cinema, Mettle and Cloudhead Games are some of the most well-known companies globally. There may currently be a window of opportunity to invest in a VR content/tech thesis as quality content and applications will capture significant value in the medium term. Moreover, as the hardware install base expands, the content and application market will grow rapidly over the medium to long term.

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Whether in Canada or California, technology and content are deeply integrated in VR. Both of these key elements must advance in tandem for the VR sector to succeed in the long term. Today, one of the key barriers to consumer adoption is lack of quality VR content. High quality VR content is difficult to produce because entirely new creative workflows and technology infrastructure are needed. Unlike traditional media, the technology stack needed to create, produce and deliver premium VR content needs to be built from ground up. These requirements are giving rise to a new form of content leader – creators that have technology in their DNA. Given Canada’s historical and present investments, through the NRC, IRAP, CMF, Telefilm and regional media agencies across Canada, in the post-production and interactive media sectors, this type of hybrid creative and technology talent runs rampant in Canada which may give us an advantage in the global VR ecosystem.

Key Challenges in Canada

Canada, thus, has an opportunity to become a leader in VR. However, entrepreneurs should prepare themselves to tackle three key challenges as highlighted by the Pulse on VR study.

- **Market Maturity:** The VR market is in the early stages of development and there is uncertainty around how quickly consumers will adopt VR headsets and/or pay for VR experiences. VR study results indicate that Canadian VR companies expect that VR market will achieve mainstream adoption in the next 2 to 5 years.
- **Talent:** Similar to other emerging technologies, it is more likely than not that VR will face a talent crunch. It is unclear whether there will be sufficient talent to fill future demand from both large and small players. Entrepreneurs may need to implement grass roots recruitment tactics (e.g. working with universities) and provide training to source and retain talent. Moreover, a potential a VR talent crunch in Canada could fuel consolidation between Canadian VR companies.
- **Funding:** Investors are cautiously optimistic about the prospects of VR. Platforms such as Oculus have been seeding development of content and applications. However, platform funding is unsustainable. There are also uncertainties around the public funding allocated to VR projects and the enthusiasm of private investors. Entrepreneurs are encouraged to pursue unique use cases (e.g. B2B) with viable business models and it will be important for VR start-ups to stay nimble and prepare for at least 24 months of runway.

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