Indsights

A Window into the Indigenous Economy

Case Study

RaceRocks 3D Inc.

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RaceRocks 3D Inc.

Meet Anita

Anita Pawluk is the president and founder of RaceRocks 3D Inc. RaceRocks, based out of Victoria, British Columbia, is one of Canada's leading high-tech companies that offer innovative digital learning experiences and customized software tools within the defence and aerospace industry.

She is a proud Métis woman from the Treaty 6 region of St. Louis, Saskatchewan, and a passionate entrepreneur who has built many businesses. She has strong financial acumen and has held auditor, control, and chief financial officer roles.

Like many entrepreneurs, career autonomy is the driving force in deciding to own her own business. Anita sought entrepreneurship to balance her career ambitions with her personal life and wanting to raise a family. After working in a demanding environment that limited time with her young daughter, Anita knew it was time to venture out on her own.

"When I was promoted from the accounts payable manager to the assistant controller, in my performance review, the only negative they could find was that I wasn't spending more than the regular 40 hours in the week for the business. And at the time, I had a two-year-old. And driving home that night to pick the two-year-old up from daycare, I realized I had a vision of her waiting at a bus stop by herself. And that was when I really realized it was time to start my own business, because I wanted to have a family and a career, and I never wanted to feel guilty about either one of them."

Launching RaceRocks 3D

Launching RaceRocks 3D

RaceRocks was founded in 2010 and started as a video effects (VFX) modeling company for the film and television industry — earning four Emmy Awards. As RaceRocks continued to grow, an opportunity arose as it learned more about the needs of the defence industry, particularly around the training methods used throughout the industry. For RaceRocks, it was an opportunity to gamify defence training by having its training modules look and feel like users were playing an Xbox or PlayStation video game, increasing the learning, engagement, and retention of information by employees and participants.

RaceRocks grew from a team of modelers (someone who develops theoretical descriptions of systems and processes in order to understand them and predict how they will develop (Definition of Modeller,n.d.)) to adding designers, artists, developers, product managers, and project managers — allowing the company to become more creative while meeting its clients' needs.

"Overall, we grew by combining the art and science of VFX technology with proven pedagogical approaches to consistently advance the state of training for workers in defence and aerospace."

Products and Services

Today, RaceRocks offers training and development packages across the defence and aerospace industries. It empowers people through immersive technology-based learning and training platforms, providing decision-makers with informed data visualization tools.

It uses cutting-edge technology to create realistic, interactive experiences for learners to practice real-world situations using e-learning, virtual reality, augmented reality, media, simulation, story, and game-based training development, as well as big data analytics.

Definitions

Augmented Reality: Training that combines real-world experiences while incorporating virtual reality technology within the training module

Big Data Analytics: Understanding patterns, trends, and correlations of large amounts of data to help make informed data-driven decisions

Game-Based Training Development: Incorporates games or interactive activities within the training module

Simulation: Uses software to create a visual mock-up of a situation or process that mimics the real-world process, for example, a flight simulator

Virtual Reality: A simulated training experience in which users are immersed in a virtual world using a headset and controllers to mimic a real-life setting

Industry Profile

Rising steadily over the past several decades, augmented reality (AR) and virtual reality (VR) training technologies have attracted the attention of researchers, governments, and users all over the globe (Cipresso et al., 2018). The first computer-based, 2D virtual reality (VR) training simulator can be traced back to 1982 when U.S. Air Force pilots were given the opportunity to learn how to control targets and pathways and complete missions before they entered the field (Cipresso et al., 2018). Following the arrival of augmented reality (AR) in the early 1990s, developers began working to integrate the two technologies (Cipresso et al., 2018).

Today, 3D AR and VR simulators have become fully immersive with the use of sensory output devices, such as head-mounted displays (HMDs), paired with audio and haptic tools (Cipresso et al., 2018). Together, the two technologies support learning in a way that improves workers' motivation, memory, and comprehension (Cipresso et al., 2018). As its quality has risen over recent years — due to leading global companies, such as Microsoft Corporation, Samsung Electronics Co. Ltd., and Sony, funding research and development of these technologies — it has been suggested that 3D AR/VR is the next largest step in technological advancement (Transparency Market Research, n.d.). With this innovation, the AR training simulation market is estimated to lead at a compound annual growth rate (CAGR) of 28.75% from 2022 to 2030, followed by VR at a CAGR of 13.3% from 2021 to 2028 (Fernandes, n.d.; MarketWatch, 2022).

Driving Factors

Its widespread use across a variety of industries has allowed the 3D AR/VR simulation market to flourish, with North American aerospace and defence sectors being some of the top driving forces in its advancement (Transparency Market Research, n.d.). Studies examining sectors such as aerospace have shown that these technologies hold the capacity to replicate real-world mental and physical stress, making them a practical substitute for traditional 2D simulators and on-the-field training (Hight et al., 2022). Employees can interact with machines, vehicles, and environments in a safe, controlled space with multiple users (Hight et al., 2022). These technologies have solved several drawbacks to conventional training efforts that have troubled these industries for many years, such as safety, cost, and accessibility. Due to this, demand for the technology has grown in the United States and Canada, which will push North America to the forefront of the global 3D AR/VR training software market over the next ten years (Transparency Market Research, n.d.).

The overall safety and cost-effectiveness of AR/VR simulation have become sizable incentives for incorporating immersive training into the workforce. With the aerospace and defence sectors having to train large volumes of personnel in various locations, AR/VR training can be seen as more cost-effective in the long term than other training modes (BusinessWire, 2022). Employees' performances can be tracked in real time while simultaneously completing training sessions in different geographic locations.

Instructors can provide instant feedback to trainees as they would in conventional training methods, allowing for continued engagement and understanding within a safer environment (BusinessWire, 2022). This has let employees better identify their strengths and weaknesses while effectively reducing the environmental and scheduling needs of previous training methods.

A custom training system is required for each industry to build a skillful workforce. In recent years, widespread skills and labour shortages have been experienced across numerous sectors due to an aging population (Government of Canada, 2022). With its variety of benefits, organizations have become progressively inclined to invest in 3D AR/VR training solutions, especially since the COVID-19 pandemic introduced much of the world's workforce to remote and virtual work platforms. While many industries found themselves negatively impacted during this time, AR and VR saw a gradual increase in growth (Vardomatski, 2021). In 2020 alone, spending on AR and VR software and services grew by 50% globally compared to 2019 (Vardomatski, 2021). In North America, investments in training are especially impactful in the aerospace and defence sectors, as the world has begun to face further issues regarding national security (Government of Canada, 2022). After years of strict guidelines on in-person interactions and training, those in the AR/VR software field have been able to further prove themselves as a mainstay in the public and private sectors. With this track record, they have been able to improve organizational processes and empower employees to make impactful decisions in their respective fields.

Future of the Industry

Advancing AR and VR technologies requires large investments to offset the high costs of manufacturing and the need to attract talented developers (Cipresso et al., 2018). This capital-intensive industry can create obstacles for small businesses since it can take time for organizations to adopt and integrate these new technologies (Vardomatski, 2021). Nonetheless, as AR and VR become more accessible and easier to develop, public sectors and organizations are seeking new techniques that will upskill their workforce. To diversify involvement and support these initiatives, businesses are looking for Canadian government procurement contracts and processes to be shared more widely (Canadian Council for Aboriginal Business [CCAB], 2017). Focusing on this area in the future will support businesses looking to work alongside each other in the aerospace and defence sectors and ultimately expand the industry (CCAB, 2017). With an increasing demand for these software services diversifying in Canada, it is anticipated that Europe and Asia-Pacific follow closely behind in these advancements, allowing digital training to become mainstream across the globe (Transparency Market Research, n.d.). Despite global players currently dominating the market, the opportunities for smaller software companies will become endless.
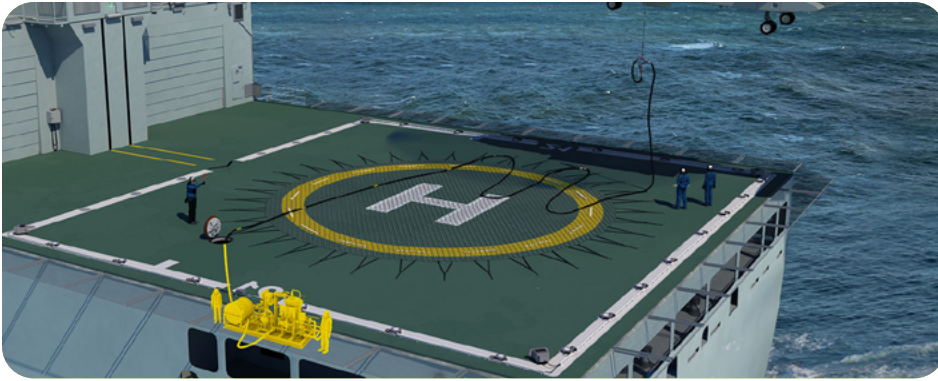
Business Transformation

Anita had always envisioned starting and running a people-first company. Like many business owners, she was unsure where to start, but she knew changes needed to be made to ensure RaceRocks was to remain successful and viable.

For Anita, and ultimately RaceRocks, to be successful, changes needed to be made at both a personal and company-wide level. These changes focused on creating a more inclusive and diverse workplace and changing the perception of success as a business and a leader. For Anita, this was a daunting task as it required her to change the way she measured success.

Throughout her career, success was often measured by working hard and hitting personal goals that would ultimately lead to progress in her career. However, in doing so, she realized a lesson that has stuck with her and shaped her vision of success for RaceRocks: she wasn't creating space for anyone behind her. She describes her experience in the corporate setting as that of

a chameleon. Always required to put on a false pattern or cloak her own opinions and voices, never able to truly be herself. She recognized that this needed to change, leading her to embrace more open work cultures within her company to promote inclusive participation from all employees.

"What I learned is if I support my team in hitting their goals, I hit my goals. And to me, that's what success looks like."

Further changes were needed to tackle issues like pay equity. One of the things that Anita undertook with RaceRocks is the completion of a company-wide audit to measure salary ranges. As a result, she found discrepancies between male and female employees doing similar work. It was important for Anita to identify these issues and remove those barriers:

"For me, equity, providing that culture where people feel safe, supported, and heard was important, but really being transparent was also super important. So, they knew that honesty is one of our values, and with just one thing we were saying, we were actually [walking the talk]."

Business Transformation

Navigating the Industry

When thinking of the tech industry, companies like Google, Facebook, or Amazon often come to mind first. These firms dominate the tech space and are embedded in our everyday lives. Operating a small, Indigenous women-led business in the cutthroat world of technology can be extremely intimidating.

Navigating this industry has been challenging for Anita, but it has been a learning experience that has allowed RaceRocks to grow and develop key partnerships with industry leaders. These valuable interactions have taught her patience and to step back, observe, and learn as much as she could from others engaged in similar work.

While it was important for her to build these relationships, she also wanted to ensure that those relationships upheld the same values that RaceRocks holds: honesty, collaboration, creativity, and learning.

"We wanted relationships with partners that didn't have to share our values, but that respected our values. Our values are honesty, collaboration, creativity, and learning. And something that helped me get through to where I am now as a leader too is to stay true to those values."

Success at RaceRocks

While there have been challenges for Anita and RaceRocks as an Indigenous business engaged in the highly competitive technology sector, she has found many ways of measuring success. The company is financially stable and is continuously winning larger contracts to develop training options for defence and aerospace firms. These successes are grounded in the work that was done to overhaul the company's culture and environment. Having an inclusive and diverse culture at RaceRocks is one of the driving factors behind its more recent successes. The tech industry has a very high turnover rate, meaning people leave and change jobs quite often. But at RaceRocks, the turnover rate is below industry standards. Anita credits her focus on developing an inclusive and diverse culture where everyone at RaceRocks has a voice and can be heard as a driving force behind their ability to be successful. She says that the people at RaceRocks define and measure the success of the company.

Furthermore, Anita places equal value on the diversity of the company, the happiness of her employees, and the openness and transparency of the organization, as she does on the financial wins. She understands that for her to be successful and for RaceRocks to be successful, her employees need to feel valued.

Anita also recognizes that success can come in the form of helping to serve underrepresented communities. Particularly, she would like to help attract Indigenous youth to STEAM (Science, Technology, Engineering, Art, and Math) programs. "We've partnered up with the First Nation Technology Council, and we've signed a letter saying that we will provide scholarships for some of the students, and we'll also then also provide internships, and if that works out, we'd also provide careers."

Future of RaceRocks

Anita's passion is people, and this passion is the backbone of the decisions she makes for RaceRocks. She understands that for RaceRocks to grow, she needs to focus on empowering her employees to become the best version of themselves — a key foundation for growth at RaceRocks. Her success is incumbent on the success of others.

She also looks to RaceRocks as an example of reconciliation. She recognizes that this is a long journey involving small increments, but it is ultimately worth it for her company and her extended Indigenous community. Partnering with the First Nation Technology Council is an important step as it will help Indigenous people enter STEAM programming and help provide them with meaningful employment opportunities. This collaboration is a win-win for Anita and RaceRocks as it continues her push to remain inclusive while helping her community succeed.

"So, for me, it's kind of part — back to reconciliation. It's, how do we give here then to see the fruits of that success over here? And for me, that's really about growing the Indigenous economy, and for me, of course, it's STEAM because I'm a businessperson and I love technology, and I think I think it has so much opportunity."

Diversity in the workforce has its advantages and can often spark innovation and a healthy work culture — key characteristics that Anita defines as a success for RaceRocks. It is important for RaceRocks to continue down this path. Anita also looks to herself as a role model for the people she serves and recognizes that leaders should represent them as well. Running an Indigenous women-led tech firm makes her a positive role model for other leaders who are looking to diversify and represent the broader communities that they serve.

As part of her reconciliation journey, Anita partnered with the Canadian Council for Aboriginal Business to implement the PAR program at RaceRocks. The PAR Program is a great way for her employees to learn more about Indigenous culture, history, and needs.

The PAR program is a social responsibility program that focuses on Indigenous relations by ensuring that corporations are good business partners, great places to work, and committed to prosperity within Indigenous communities (CCAB, 2022b). There are four key drivers that the PAR program focuses on:

I) Leadership Actions — the actions taken by the leadership of the organization that focus on Indigenous relations, for example, setting policies and scheduling self-assessment exercises to ensure they are meeting PAR requirements.

II) Employment — ensuring that there is an equitable representation of Indigenous Peoples in the workplace, including recruiting, training, retraining, and supporting the career development of Indigenous Peoples. This pillar also includes sensitivity training and providing support to existing Indigenous employees.

III) Business Development — committing resources to the development of relationships with Indigenous-owned businesses. This pillar can include mentorship and capacity building to help with future business development.

IV) Community Relationships — there are two components: Engagement and Support

a. Engagement — providing time and resources to develop and sustain positive relationships with Indigenous communities and stakeholders. This action step may include communication, information sharing, involvement in events/activities, and partnerships.

b. Support — a commitment to developing positive and progressive relationships with Indigenous communities and stakeholders through financial or in-kind support (Progressive Aboriginal Relations, n.d.).

"Through PAR, we also got to pull the entire company into these learnings and unlearnings. We spent the first two years with the commitment level; it's a three-year program, learning about Indigenous worldviews and values."

For Anita, this is important as she sees herself as an agent of change and reconciliation. It also benefits her company: "It allows you to go together as a team through it, not just individually and then just not talk about it. We have Indigenous leaders come into a lunch and learn once a month and talk to us about any sort of topic that they have lived experience in, again to learn. And I just believe that if we want to have a diverse, inclusive team, which I do believe pushes a business forward because you have more lived experience at the table, you have more ideas coming together."

"[The] PAR program helps us learn how to do that in a safe way. It teaches you, again, that cultural awareness program to step back and how to respectfully ask questions. But how do you respectfully ask questions? Well, you've gone and done your homework first; you've tried to learn as much about another culture as you can, so you're informed to some degree before you start asking the questions."

Métis Values and Beliefs

Métis Values and Beliefs

For Anita, discovering her Métis heritage challenged her views on success, career fulfillment, and leadership. The traditional ways of functioning in the business world were tied to notions of keeping your head down, working hard, hitting your targets, and putting in extra time in the office, which left her feeling dissatisfied.

It wasn't until Anita began to discover and connect with her Métis heritage that she realized the traditional business model was not a fit for her and RaceRocks. She connected with family members and applied for Métis status. This reconnecting allowed her to learn more about her past and attend various ceremonies. She felt it was necessary to experience these things firsthand rather than read about them — taking her completely out of her comfort zone.

Ultimately, these discoveries were exactly what was needed for Anita and RaceRocks. It taught her a valuable lesson:

"I went and sat in the Full Moon Ceremony with my aunt and cousin also, and I realized I didn't have to know the answers to everything. Sometimes I just had to sit and feel. And once I was able to realize I didn't have to know the answers to everything and I could tell people I didn't know the answers to everything, it made finding those answers together more successful for all of us. And more successful for the business too."

Leadership Influences

Throughout her journey, Anita drew on the teachings of her Métis heritage, which played a major factor in her business decisions. One thing she learned was the importance of collaboration. Working collaboratively requires open communication amongst all the parties involved — this was something that Anita needed to learn:

"For me, it was really learning that communication. That's where I guess I had to learn the feelings and the vulnerability around it because if I was going to communicate and get my team to come along with me, they had to really understand why. And before that, it was because I told them to. But now, when everyone understands why they're doing something, the outcome is just that much better."

Her Métis heritage also taught her the importance of leading with honesty. Understanding her heritage allowed Anita to push back her need to overachieve and to do things perfectly. To overcome this expectation, she was able to look at things through an Indigenous lens and incorporate Indigenous worldviews into her thinking. She credits this as helping her develop a more well-rounded perspective on her leadership style and her business decisions.

"...once I was able to realize I didn't have to know the answers to everything and I could tell people I didn't know the answers to everything, it made finding those answers together more successful for all of us. And more successful for the business too."

Advice for Future Entrepreneurs

When it comes to starting your own business or breaking into the entrepreneurial world, Anita has some excellent advice for those looking to venture out on their own.

Start your business journey from the side of your desk — if you are working for someone else in the business world, this is a great opportunity to learn from them and to ask them questions while gaining the necessary skills and experience.

Be curious, and when you are ready to make that leap, make sure you can clearly articulate what it is you want to do. Being able to communicate your passions through things like a viable business plan is a great way to get people to buy into your journey, which is vital for long-term success.

And lastly, there is no need to rush into things; take the time to reflect on what is important to you and continue to grow your passion for whatever you decide to do. Opportunities may arise, but your business cannot be everything to everyone. Learning to focus on your passion and drive will help you get out of bed in the morning and give you the ability to say no to things that do not provide value to your personal and business life.

"If you want to have autonomy over your life, entrepreneurship is a fantastic gateway there. And it's just really finding that area that you want to be, that purpose that you want to be in, and then going after them on your own."
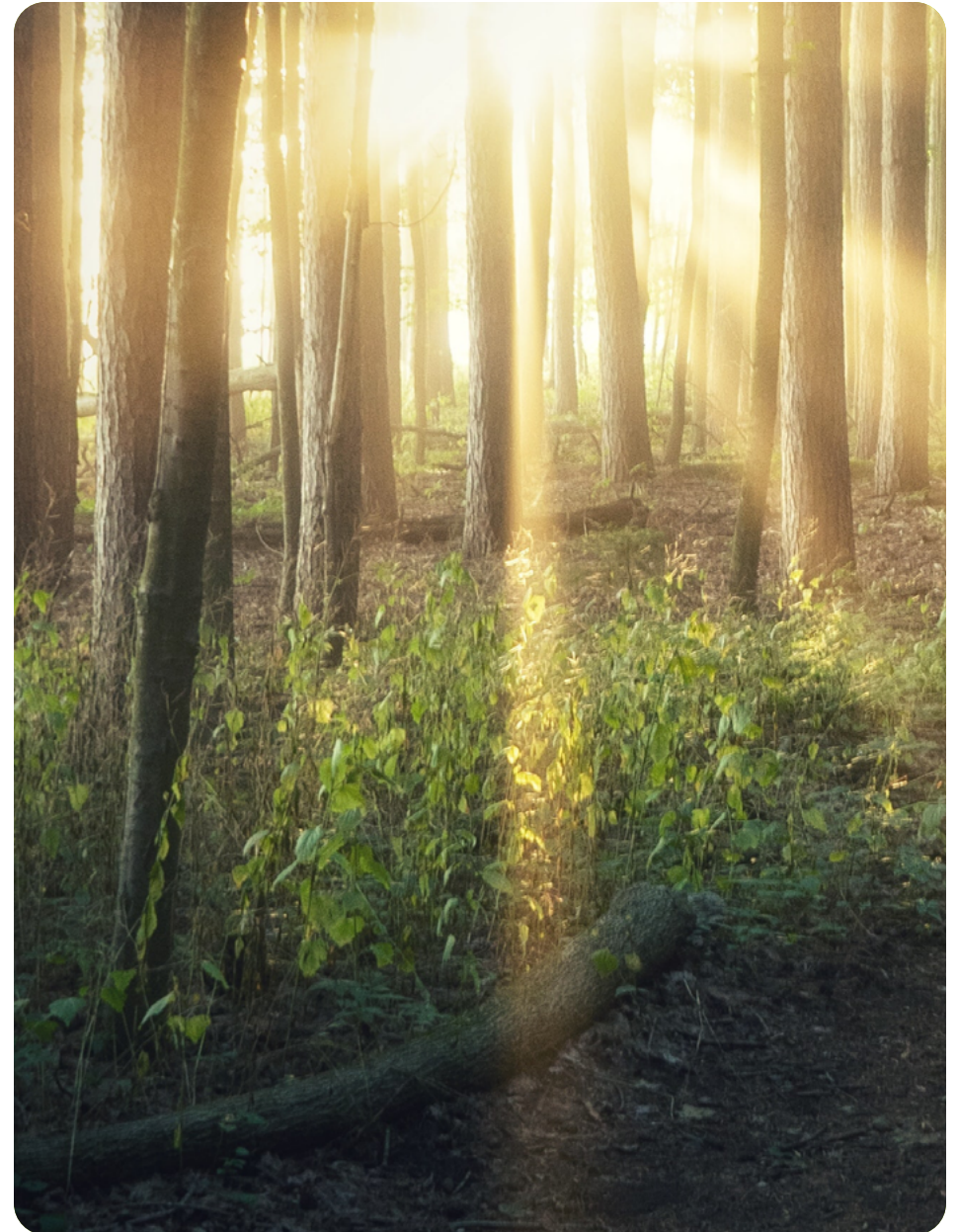
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