



NETWORK OPERATIONS MADE SIMPLE

COMPANY FACT SHEET

Business Summary

The Fourth Industrial Revolution is here. From marketing to agriculture and health care, enterprises are leveraging Artificial Intelligence technologies, paired with automation, to improve efficiencies and unlock new business opportunities. However, the usage of AI has been very limited for the automation of complex engineering processes, while the need is greater than ever with ever-increasing network complexity and the introduction of 5G. Reason: Existing, highly valuable Engineering knowledge is not easily transferable as it doesn't reside in a digital format.

Now, imagine a system that simplifies the digitalization of this knowledge and focuses on creating Machine Learning models to automate repetitive tasks in Network Operations. This was the premise for founding Tupl in 2014. While the rest of the wireless industry is coming late to this realization, Tupl has been delivering impressive results in terms of reduced manual labor (90%), higher speed (100x) and higher accuracy (4x) when compared to existing, manual engineering processes. Furthermore, new value is created by being able to rely on 100% consistent decisions and by discovering previously undetected issues.

Customer Problem & Opportunity Size

Network Operators need to find ways to reduce their operational costs in the face of increasing competition and declining ARPU, and at the same time, accomplish tasks that never get properly done because of their complexity and the lack of time. Automation of manual, repetitive tasks, is the only way forward. Unlike classifying images or voice sounds, making a qualified engineering decision involves complex data management paired with deep domain expertise, based on information points coming from a diverse set of data sources which are often siloed. Every customer workflow is somehow unique, so resolving engineering problems requires a high level of customization, which is very costly to do using legacy technologies.

We estimate that, in the Wireless Operator market alone, such automation can provide north of \$100M/year cost savings for a Tier1 operator. That equals \$10B/year savings worldwide.

Tupl Solution

Our TuplOS is an Open Source based AI Engine focused on the creation of a Digital Knowledge database for complex processes. It is well known that up to 80% of the AI value creation cycle is invested in data transformation and training, and thus the TuplOS system includes utilities to collect data, generate features, create models and simplify training processes. While very simple to use, our AI Engine enables the development of complex automation applications. Example applications include automated technical customer care (Automated Customer Complaint Resolution – ACCR), Proactive Care, automatic network troubleshooting (Network Advisor), network construction prediction, and NOC Automation. Most of these are creating benefits north of \$10M/year/operator/use case, proven by actual numbers from our clients.

Tupl Customers Today and Tomorrow

Our public references include Tier-1 operators such as T-Mobile US and Softbank for several different automation by AI use cases, and we have ongoing projects in four continents. Latest developments include several global partner agreements, and it is highly likely one of our partners is already serving any given operator in the world. Contact Tupl for details.

In 2018, our customers were limited to traditional telecom operators, but it is clear the same need of automating complex engineering tasks are emerging in other vertical use cases. Examples of these are IoT networks and energy networks. The more complex the network operations, the better fit for Tupl.

The Tupl Advantage

It is clear to us that there is a burning need for operations automation. Current attempts have been made by companies using legacy SW approaches that are cumbersome and not maintainable. With our AI Engine approach, we can deliver solutions that are faster and, not purely relying on code, are more adaptable and easy to maintain.

Furthermore, using our approach we have been able to deliver applications that were previously deemed too complex to be achieved. We intend to establish Tupl as the global leader in Intelligent Process Automation (IPA) for network operations.

Tupl Core Team



Petri Hautakangas, CEO

Roamed the world in Sales Exec and CTO positions until it was finally clear to him: start-ups with the right team and vision are bringing the next level of innovation. Joined October 2015.



Pablo Tapia, Founder and CTO

Visionary with execution skills. R&D roles, patents, book author, key staff at T-Mobile; all to get groomed for founding and CTOingTupl. The rest is history.



Hichem Garnaoui, COO

Joined Tupl from Google in September 2017. True story; was interviewed for Tupl Board position, but got so excited that he wanted to join full-time. Brings operations excellence like no other.



Héctor Montes, VP Sales

Co-founder, bringing a wealth of experience in mobile network optimization, process automation and OSS/BSS market space; with a passion for making disruption a reality.