

Executive Interview: Jakub Kucera, Cofounder and CEO of AnaPico

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The coronavirus pandemic has created a major health and economic crisis for the world. How have you adjusted your business to minimize the risk of infection, and how have AnaPico's operations been affected?

Social distancing and working from home make it challenging to collaborate in teams, but with modern web-based tools, it can be done. We meet online with our co-workers and sales channels and explore new ways to support customers and the sales process. Our products are also heavily invested in GUI software and instrument firmware. This allows our engineers to address requirements with modifications to a digital component. We have been offering downloadable updates already for many years.

What motivated you to start a company? How did you decide on the name AnaPico?

AnaPico is a word created from "analog" and "picosecond."

At that time, we had been working on the design of an integrated sampling head using nonlinear transmission lines. We were using analog design techniques and looking for picosecond rise times to achieve the desired bandwidth.

Ironically, my mom said inquisitively, "Jakub, give me a couple of words that describe this new project of yours...and just an instant later, I stumbled on the new name for our company, AnaPico.

Describe the range of products AnaPico offers, which have been developed since your first sampling head.

After launching our first product, the AP3501, a 35 GHz bandwidth sampling head based on our own ASIC, we looked into other product ideas that could possibly benefit from our RFIC design knowledge and based on a custom RFIC. That included some broadband magnetic and electric field sensors; high bandwidth, high input impedance buffers for digital scope front-ends; and some clock-recovery designs.

At the same time, we realized that we could launch our own end user product, and this was the birth of our first RF signal generator, the APSIN3000, which was launched in 2007. We continued extending that product range with a 6 GHz and, later, a 20 GHz model in 2010.

What differentiates AnaPico's products from those of your competitors — some much larger than you?

We have tried to be realistic from the beginning. Competing with well-established and well-recognized multi-billion companies in a worldwide market would not be an easy task.

We explored customer sentiment and found small niches unaddressed by the larger organizations. We found a number of needs we felt we could address better than others, and those included portability, low power consumption and battery operation.

Since then, we have refined the product profiles by carefully listening to every single user and customer. Thanks to our agile business setup, we are also uniquely suited to offer customization, such as form factor, additional firmware features or hardware enhancements.

We've kept our org chart quite flat to allow for fast decisions and direct customer engagement.

Discuss your strategy for design and manufacturing — the unique aspects which enable your products to “stand out.”

User friendly is often promoted for a wide range of instruments, but we take it very seriously. We know each customer has a different application environment, so truly “user friendly” products and software are quickly operable in a wide range of environments. We believe an intuitive interface and interoperability with other instruments are equally critical to the overall performance as the key technical specifications.

We take feedback consistently from the end user and make revisions regularly. I don't think our competitors focus as aggressively on simplifying the user experience out of the box.

How do the Swiss and company cultures influence your success?

According to surveys, "Swissness" often stands for high quality and sometimes also for high prices.

AnaPico has always committed to quality, while being aware that in a highly competitive worldwide market, the price/performance ratio must be best-in-class, especially as a relatively new brand.

Now, after more than 10 years in the market, we have realized that our long-term strategy was right, even though we may have sacrificed some margin. Our customers appreciated and came back. We are proud of this because AnaPico has also always valued world-class after-sales service and support.

When designing a new instrument, what is the relative importance — and challenge — between the hardware and software?

Electronics — RF instrument design, in particular — has always been a very interdisciplinary task. With rapidly advancing technology, there is a gradual shift from analog to digital. This also means that there is an increasing software portion at various stages of the product design. The challenge is to constantly adopt innovation to the changing availability of state-of-the-art technology and find the right "balance" of analog and digital.

Another challenge is to find the skilled engineers that understand co-designing mixed-signal RF hardware and firmware.

Looking to the future, how do you see your product portfolio evolving? Do you plan to introduce any new categories?

Oh, yes, you can expect a lot of new products from AnaPico in the near future.

First, we are introducing signal generators with even purer signals, faster switching capabilities and wider frequency ranges that expand into mmWave. In addition, we have crossed a significant design milestone in our signal analysis capability with the rollout of our 2020 phase noise test platform. Finally, we have just released our vector-modulated signal generator platform. This is a new category and represents the beginning of a wide range of exciting modulation possibilities for the most demanding RF requirements.

Finally, we invest substantial resources in R&D for a new product category. Our product pipeline is indeed ambitious.

What markets or applications look attractive for AnaPico's growth over the next four or five years?

The RF T&M market constantly needs to adapt to new trends and standards. Due to the obvious need for greater bandwidth, civil applications are exploring higher and higher frequencies. At AnaPico, we will certainly use more of our microwave and mmWave know-how to address these requirements.

Describe how your marketing and sales programs reach customers world-wide.

The needs for RF test and measurement equipment are expanding fast, with IoT, 5G, SatCom and other emerging platforms.

We have increased our portfolio of qualified manufacturer's representatives, resellers and OEM customers in all corners of the world. It takes time to develop these sales channels and marketing programs, but we have been building the pieces for some time. Our most technical engineers spend many weeks per year in Asia, the Middle East, throughout Europe and inside the USA with local customers and sales organizations, ensuring deep market penetration in the verticals we serve.

As the CEO of a company the size of AnaPico, you face the tug between your technical expertise and interests and the operational and financial responsibilities managing a company. Is that challenging? How do you balance the scope of your role?

Yes, it still is. I was and always will be an engineer at heart. My passion is about addressing new technical challenges, solving problems, expanding products and unveiling innovations. Nevertheless, we began with modest means and little outside investment. This necessitated that I work on revenue generating projects and designs over theoretical R&D.

Fortunately, as we have grown and expanded our engineering team, I can now invest more time advancing our core technology while our talented engineering staff productize the technology for a growing list of exciting — and often demanding — customer applications.

It's a great time to be an RF engineer.