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## Volpi developing the world's first 6-color dPCR reader

### CASE STUDY

**Client:**  
Stilla Technologies

**Website:**  
[stillatechnologies.com](http://stillatechnologies.com)

**Industry:**  
Life Science

**Solution/Application:**  
dPCR

Stilla seeks to challenge BioRad, Qiagen and others providing dPCR systems by working with Volpi to develop the world's first 6-color dPCR reader – Volpi's first full-instrument effort.

### Overview

Stilla, founded in 2013 at Ecole Polytechnique, is a Paris-based life sciences company focused on accelerating the development of next-generation genetic tests. Stilla chose to work with Volpi to design, develop and manufacture the world's first 6-color dPCR reader while meeting several other key criteria:



- The instrument must be compatible with Stilla's first 6-color assay
- It must also be compatible with all existing assays using Stilla's Prism 3 dPCR reader
- The measurement results need to work flawlessly with the image processing in Stilla's Crystal Miner software
- It needs to be manufactured to fuel Stilla sales in Europe, the USA and China





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## Approach

With the goal of manufacturing hundreds of units annually, Volpi began work in 2019. Instrument prototypes became available in 2020 with a full series launch in 2021.

Volpi began with the development of the optical module, including:

1. Baseline measurements with Prism 3
2. Module feasibility with breadboarding
3. Compare the module breadboard performance with Prism 3 instrument performance
4. Module pre-prototyping
5. Module prototyping

During optics development, Volpi simultaneously worked on the instrument:

1. Development
2. Engineering builds
3. Zero-series build
4. Series production at Volpi in Switzerland

## Results

The availability of a higher degree of multiplexing due to the expansion of the number of optical channels from 3 to 6 will *greatly enhance the options for research and diagnostics assays* while better positioning Stilla for both a higher valuation and likely a better price/return for investors upon Stilla's sale.



*We're very excited to be developing a revolutionary instrument in an exciting, fast growing space. The opportunity to help our client help their customers realize leaps in measurement accuracy is a core of what we do here at Volpi, and this instrument is a great example of that.*

Max Kunz  
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