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A Danish student launched his startup with \$500 and no					

A Danish student launched his startup with \$500 and no relevant knowledge. Today he makes \$1,5 million by outsmarting Google Translate at scale.

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Martin Boberg founded his translation business out of Copenhagen Business School in 2010. It worked out pretty well.

- Martin Boberg founded Diction as a 20-year-old student.
- Seven years later, it's a leading Nordic translation agency raking in million-dollar figures.
- Boberg explains how combining tech and humans enables his business to thrive.
- However, AI and machine learning tech is quickly transforming the \$40 billion global translation market.

What does it take to get started in the translation business?

Not much other than an entrepreneurial spirit.

Seven years ago, then 20-year old business student Martin Boberg founded the translation agency Diction with only 3,000 DKK (\$475) in initial capital and no translation skills.

"I was studying at Copenhagen Business School and wanted to do something relevant to my studies. We started out using language students as translators which meant we were cheaper than most competitors," explains Martin Boberg, who cut his business chops selling ads at Berlingske, explains.

Today, Diction is one of the leading translation agencies in the Nordics with an expected revenue of over 10 million DKK (\$1.6 million) in 2018, still without external funding.

Cloud-based tools have changed the translation business

Pricing is still an integral part of Diction's business model, but the primary factor driving the rise of the startup has been technology. Initially, it was about marketing, says Martin Boberg.

"We were one of the first in the business to use online advertising like Adwords. That gave us a huge boost right from the get-go, and then around 2012, we saw a new generation of CAT (Computer-Assisted Translation) as cloud-based services. That meant you could more or less compete one the same level as the bigger players because we had equal access to technology."



Between 2011 and 2016, Diction grew 125% on an annualized basis.

Considering Google Translate and other AI-powered tools on the market, isn't translation all automatic nowadays?

Not so fast, says Martin Boberg.

"In recent years, there has been a lot of automation in translation technology, but in most cases you still need a human to verify the work and do the final editing. Still, it has fundamentally changed the way our translators work. The machine does a lot of the actual translation, while the translator becomes the expert with final approval. So you need to understand the languages, the subject, and the software."

We are approaching speech-to-speech translation in real-time

Language is tricky, even for today's AI and Machine Learning. It is a complex human expression, continually changing, and full of connotations and subtle meanings. That is why machine translation even today performs best when the content is <u>standardized and</u> <u>predictable (http://ufal.mff.cuni.cz/pbml/93/art-plitt-masselot.pdf</u>). But that is about to change with rapidly evolving technology.

In 2016, Google introduced a new tool, GNMT (Google Neural Machine Translation) that uses artificial neural networks (<u>http://www.businessinsider.com/r-googles-hinton-outlines-new-ai-advance-that-requires-less-data-2017-11?r=US&IR=T&IR=T) to produce faster and more correct translation, including comprehension of semantics. In 2017, Google introduced language-translating headphones with 10 different languages.</u>

Neural Machine Translation is expected to transform speech-to-speech translation in real-time. In a few years, you could have a simple conversation in almost any language, thanks to the machine.

Read More: This device instantly translates Japanese and Chinese (<u>http://uk.businessinsider.com/japanese-company-instanttranslation-device-travellers-ili-words-languages-chinese-english-2017-2</u>).

Harry Potter is beyond reach of any computer

Similarly, CAT will continue to change the business of professional translation, because the technology gets smarter by the day. Regardless, there are still language areas that are beyond the reach of even the most advanced computers.

"A machine would not be able to translate Harry Potter, and is not even close. Fiction is still something very special in terms of language and expression. It is about evoking emotions, and that is kind of a blind spot for computers. They will probably get there at some point but is very hard for me to say when, and I work in this business."

Having been based out of Copenhagen School of Entrepreneurship until 2014, Diction today has offices in Oslo, Copenhagen and Uppsala. Diction has 11 full-time employees and works with more than 1,000 freelancers. The agency translates more than 8 million words per year.

The the global translation industry had an estimated size of \$40 billion in 2016, and with projections up to \$45 billion in 2020. The global language technology industry is estimated at (<u>https://www.gala-global.org/industry/industry-facts-and-data</u>) \$34 billion dollar.