The era of AI and Bots

...and how Unit4 is getting closer to deliver self-driving business applications...

Thomas Staven
Unit4
By Artificial Intelligence (AI), we mean the ability for a computational device to perceive its environment and based on “observations” make “rational decisions”
By Bots (or agents) we mean (small) automated software applications programmed to do specific tasks

(Coupled with AI and Natural Language Processing, a bot can mimic a person)
Approx. every 10 years there is a new paradigm shift in technology... we`re convinced we`re seeing one now and we believe the next one will come quickly after that....
The next paradigm shift is here…

1. **2000s** From Windows to Web
2. **2007** From Web to Mobile
3. **2016** The era of AI and Bots

User interface / Complexity

Application Intelligence / Simplicity
Why is this happening?
Next generation workers demand simplicity and ubiquity
We’re living with a Work-life blend, not Work-life balance
BYOD is a given, BYOS is following
The rise of the "silent conversation"
This is transforming interaction patterns….

The rise of the silent conversation is unstoppable

Before year end we’ll find it normal to “talk” to brands and companies through messaging apps

‘2.5 billion people have at least one messaging application installed’ - The Economist

The most frequently used app on the iPhone is not the phone, the web browser, or even the camera: it is messages. Apple's customers send 200,000 iMessages per second, up from 28,000 in 2012.” - Apple

‘over 30 billion messages sent via WhatsApp every day’ - Venturebeat

‘32% of people would rather communicate via text than over phone’ - https://processflows.co.uk/

‘By 2020, we predict that at least 40 per cent of people will primarily interact with people-literate technologies like [chat and voice] these removing much of an organisation's need to invest in computer literacy training’

http://www.itproportal.com

‘…The net result is that you and I will be talking to brands and companies over Facebook Messenger, WhatsApp, Telegram, Slack, and elsewhere before year’s end, and will find it normal’ - Chris Messina, Uber
The big boys are paving the road for us...

“I don’t know anyone who likes calling a business. And no one wants to have to install a new app for every business or service that they interact with. We think you should be able to message a business, in the same way you would message a friend.” Mark Zuckerberg at F8

“By 2020 Microsoft will center its strategy around Cortana, its intelligent personal assistant, instead of Windows” Gartner

“Software bots will be as big as mobile apps. Think of bots that you will build as the new websites or new mobile apps. Your customers will interact with your business through these bots” Satya Nadella to Techrepublic

“Pretty much everyone today who’s building applications, whether they be desktop apps, or mobile apps, or websites, will build bots as the new interface” Satya Nadella at WPC

‘+ 3 million units sold in +1 year’
Technology has taken a leap forward with AI and ML breaking through from the labs to the real world.
AI will play a strong part in delivering a new generation of business software...

Smart assistants and chatbots will be top consumer applications for AI over next 5 years

Source: http://venturebeat.com/2016/06/22/smart-assistants-and-chatbots-will-be-top-consumer-applications-for-ai-over-next-5-years-poll-says/
Labor’s contribution to GDP growth is disappearing, productivity must pick up...

Compensation for a shrinking workforce is needed in order to keep economic growth. Productivity must come from elsewhere, i.e. from a technological potential for growth.

Source: McKinsey employment and growth, January 2015
To maintain future productivity and economic growth, organizations will have to...

<table>
<thead>
<tr>
<th>Find ways to mitigate the labor pool's erosion by providing a more flexible work environment for women and older workers....</th>
<th>Simple solutions that can be accessible from anywhere</th>
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<tbody>
<tr>
<td>Find ways to attract and engage rare young talent....</td>
<td>Innovative solutions reflecting the needs of the next generation</td>
</tr>
<tr>
<td>Create a working environment where employees will (more and more) be contingent workers....</td>
<td>Solutions, requiring no “footprint”, no training and accessible through any UI / app</td>
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54% of any persons’ work week is a waste of time

Source: Workfront Survey 2015
…because at work we feel overwhelmed
Imagine you had an army of bots to help you...
Our vision is about allowing our customers to focus 100% on running their business and serving their customers, avoiding spending time and energy interacting unnecessarily with enterprise software.
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..which is all about boosting people productivity, reducing in-efficiency in organizations.
But it is not just about freeing up time...it is also about augmenting people!

“Why don’t you connect with...”

“We predict that...”

“Did you think of...”

“Take a look at...”

“Based on experience...”

“All your data tells us...”
The highest impact comes from augmented people…

**People Productivity**

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<th>Impact of freeing up time</th>
<th>Impact of augmenting</th>
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<tr>
<td>+</td>
<td>Value creation</td>
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<td>+</td>
<td>Engagement</td>
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<td>+</td>
<td>Happiness</td>
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<td>Promoters of their organization</td>
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Self-driving Software is a new “design principle” or a mindset on how we want to develop software ....

Self-driving processes

- Automate Manual Tasks
- Reduce Input Required
- Exception Management
- Real Time Insightful Decisions
- Sense Potential Problems and Prescribe Solutions
- Intelligent Recommendations
So...it is not about replacing people with machines...

“Technology is to extend our reach...just like we have always built tools” – Ray Kurzweil, Google

“It is not humans or machines, it is humans + machines” – Dr. John Kelly, IBM
Our vision: Self-driving applications

Business Software and business processes will become non-existing or 'silent' in its current form. Interaction will be natural through other UIs (your favorite app) and other physical products.
Meet Wanda – your Digital Assistant

Natural Language Interface, Self-learning, Proactive

Bots (Agents)
(Examples)
- Time Mgmt.
- Workflow
- Purchasing
- Office 365
- Office Delve
- Public data