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Let me turn now to Patrick. Patrick, could you give us your perspective? I know you will also focus a little bit on how the technological revolution is changing the nature of the workplace.

Patrick NICOLET

"Man is largely a creature of habit, and many of his activities are more or less automatic reflexes from the stimuli of his environment", Granville Stanley Hall, American Psychologist and Educator. This point notably explains the gap you will always find between technology development and its adoption by citizens.

From an IT Services industry perspective, I will focus my contribution around Automation and Labor.

Automation and Labor: Observations

Automation can be defined into three categories:

- **Monitor** End User Experience, Business Process, Application Performance;
- Industrialize Robot / IT Process Automation, Test Automation, Service Orchestration;
- Cognitive Services (driven by Big Data) Artificial Intelligence, Machine Learning, Predictive Analytics.

Today, we assist to a combination of these categories (cf. Application Programming Interface vs. iPaaS) delivering new ways of working and increasing business value:

- Efficiency More productivity and savings;
- Effectiveness Increased quality and compliance, simplified process, facilitated 24/7 coverage;
- Outcomes New source of revenue, new insights, reduced time to market.

On **Labor**, there is no question that technological change is drastically disrupting both workplaces and the social environment:

- Employer-Employee relationship / Work duration Due to technological changes, increasing numbers of workers turn into freelancers, temps, and contractors (e.g. Gigster and the "digital nomads", Millennials are now aiming at having to have up to 4 different experiences before the age of 30): "Within a decade, estimations are that nearly half of the 145+ million employed Americans are expected to turn into so-called "independent workers" (Hill Steven, 2015, New Economy, New Social Contract: A plan for a safety net in a multiemployer world, New America Foundation);
- Mobility The question of mobility goes both ways: you bring people to work or you bring work to people. If
 people cannot come to work today (e.g. Upcoming US administration with visa restriction in the technology
 sector), you can bring work to people. This is a different approach: the centers / factories approach. In any
 case, the location of the center will not be determined by where people live and they will need mobility. It is
 another aspect of flexibility beyond the labor conditions;
- Augmented / Connected workforce Thanks to automation companies are now able to provide powerful tools to enhance workforce productivity. All these tools require more sophisticated competencies and open new areas of work, but only to people with the right skills (e.g. Mathematicians beyond the Financial Services industry);



- Competencies acquisition / Reskilling Employees are expecting a more systematic access to highquality training on technical topics, effective coaching, new competencies and reskilling. However, here again, only a limited population will be able to access this competencies acquisition / reskilling (e.g. Functional testing vs. Analytics);
- Talent war / Diversity Few years ago, talents with a genuine interest in technology joined IT Services companies. Today, with the digital challenge, there is an intense talent war that has reached all the industries at a global level. Even if countries face high unemployment rates, companies are having hard time finding and retaining talents: "software developers right out of college can command starting salaries of up to \$90,000. Once in their jobs, they can get as many as 20 recruiting calls a day trying to convince them to leave for another company. And when they do, a 20 to 25% bump in salary is not unusual" (Boston Globe, February, 19th, 2016). From a diversity standpoint, companies will retain talents through attractive working conditions (e.g. Planning post maternity leave reinsertion, internal promotions).
- Labor taxation Labor taxation is an important cost for companies. However, it also constitutes an important source of funding in our welfare system. When we reduce the number of employees / increase productivity, there is question about the financing of this welfare system;
- **Shared economy** Shared economy is primarily driven by targeting economic inefficiencies to turn them into pools of profit. What we see in mobility (e.g. Uber) and hospitality (e.g. Airbnb) will apply to the labor market.

Automation and Labor: Path forward

I think that there are especially two paths to explore, along with **Education** and the **Relationship between humans** and machines.

- Employment status multiplicity Today we mainly have four status: Employee (for both public and private sector), Independent, Temporary and Unemployed. Our society is going to move to an employment status multiplicity. The granularity between all these status will be linked to flexibility. This idea is necessary to face the changes produced by technology;
- **Basic / universal income** Discussions around the establishment of a basic / universal income have already started with different successes:
 - **Switzerland** Voters have overwhelmingly rejected (nearly 77%) this year a proposal to introduce a guaranteed basic / universal income for all, whether people work or not;
 - Finland The country is about to launch an experiment in which a randomly selected group of 2,000-3,000 citizens already on unemployment benefits will begin to receive a monthly basic / universal income of €560. The pilot study, running for two years in 2017-2018, aims to assess whether this income can help reduce poverty, social exclusion, and bureaucracy, while increasing the employment rate.

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I also think we should come back to the question you raised about what this implies regarding the way in which we think about security and pensions in old age. I would say that in the United States for example, for many people, if not most, their health insurance is linked to their employment status. If they change jobs, they move to the employment plan of their new employer. Now, if more and more people do not have employers, what does that mean regarding the way in which we think about health and pensions. There is also a variety of things which we have traditionally associated with the relationship between individuals and the place in which they work. This assumes that that relationship would be stable and long lasting, and now, as you say, it is changing quite dramatically.