Transforming Higher Education in Engineering and Technology
Winter is coming
59% of Gen Z (14 - 23 yrs.) prefer to use YouTube to learn, however, still 39% favor that a teacher directs the instruction.

41% use apps and games to learn.

Source: Pearson (2018)
Less than 40% of students enrolling for the first time at a four year college graduate in four years.

Only 26% of working US Adults with college experience strongly agree that their education is relevant to their work and day-to-day life.
For how long will higher education be a good investment?

Sources: PayScale, National Centre for Education Statistics
*Sample of 452 institutions †Based on 2012-13 costs $-15% or worse
So many signs

41% felt higher education was meeting Industry’s needs

43% agreed that higher education gave students the skills they needed to join the workplace

40% of American employers say they cannot find people with the skills they need.

Mckinsey. Closing the Skills Gap: Creating workforce-development programs that work for everyone. 2017

Source: IBM’s Institute for Business Value, in conjunction with the Economist Intelligence Unit. Pursuit of Relevance Survey. 2017
So many signs...

The **10** Top Skills That Will Land You High-Paying Jobs by 2020

1. Complex problem-solving
2. Critical thinking
3. Creativity
4. People management
5. Coordinating with others
6. Emotional intelligence
7. Judgment and decision-making
8. Service orientation
9. Negotiation skills
10. Cognitive flexibility

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Top 5 Industries at Risk of Disruption

1. Media & Entertainment
2. Transportations
3. Financial Services
4. Education
5. Insurance

From the following eight economic sectors: Please rate from 1 to 8, where 8 is the most innovative and 1 the least innovative.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Avg. Rating</th>
</tr>
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<tbody>
<tr>
<td>Gastronomy</td>
<td>6.3</td>
</tr>
<tr>
<td>Retail</td>
<td>5.2</td>
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<tr>
<td>Heavy industry</td>
<td>4.8</td>
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<tr>
<td>Banking</td>
<td>4.5</td>
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<td>Agriculture</td>
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<tr>
<td>Mining</td>
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<td>Insurance</td>
<td>3.8</td>
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<tr>
<td>Education</td>
<td>2.8</td>
</tr>
</tbody>
</table>

Source: State of Innovation Report, CB Insights. 2017

Source: UTEC Computer Science Students’ Survey (645 students) 2018
Regulation

Signaling
Winter is here
They do not require college diploma for top jobs.
Is winter here?
—or—
a real opportunity
to change the World?
New tools

59% of Gen Z and 66% of Millennials believe technology can transform the way college students learn in the future.

Source: Pearson (2018)
We need to rethink our programs.

Not just a lot of pieces, but a comprehensive and effective one.
We need to bring Industry inside the class
We need to **transform** the classroom into learning spaces
We need to incorporate students in the design and implementation of new models.
We need to have professors that feel passion about teaching.
We need to reduce the cost so we can reach everybody.

Around 70 million out of the 200 million people worldwide out of work are young.

Source: ILO
We should lead...

The best way to predict your future is to create it.
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