

HIGH-TECH
entrepreneurship...
...*in the City of Bar??*

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1. MARKET MOMENT

- Advancements in electronics
- Demand of existing markets
- Emerging markets – China



“Recreational use”

- + 10 US States
- + Canada, Georgia, South Africa
- ? Greece
- ? Macedonia
- ? Bulgaria
- ? United Kingdom

- ✓ Ensure it is chemically safe
- ✓ Pay taxes

COMPANY PROFILE: Q-Tek d.o.o.

*Manufacturing facility in Free zone LUKA Bar,
Montenegro*

Modern and precise CNC turning centers have been set up in our brand-new machine shop.



COMPANY PROFILE: Q-Tek d.o.o.

Assembly line in Free zone LUKA Bar

- Dedicated environment has been created to enable high clearness and precision and components to get assembled together.



2. Key element in every project

New team (~15 pers.) was created to involve:

- ✓ *Electronics engineers*
- ✓ *Mechanical engineers*
- ✓ *Experimental physicists*
- ✓ *Application chemists*
- ✓ *Software architects and programmers*

5 Ph.D.-s in *Physics, Chemistry, Biology, Toksicology and Electronics*



Q-Tek d.o.o. raised Montenegrin Flag at Analytica-2018 EXPO in Munich on April 10-13th for the first time in history



**The largest
international trade fair
focuses on all topics in
modern industrial and
scientific analysis.**

**The new product and
world premiere from
Q-Tek llc**

**Mass-spectrometer
“MAESTRO- α MS”**

3. Motivation

2.1 Why do you want to STUDY

- engineering
- mathematics
- physics
- ???

2.2 Why do you want to work at..

- Q-Tek,
- FLEKA
- Clinical Center
- Plantaže
- ???



"Everybody has a plan, until they get punched in the face."

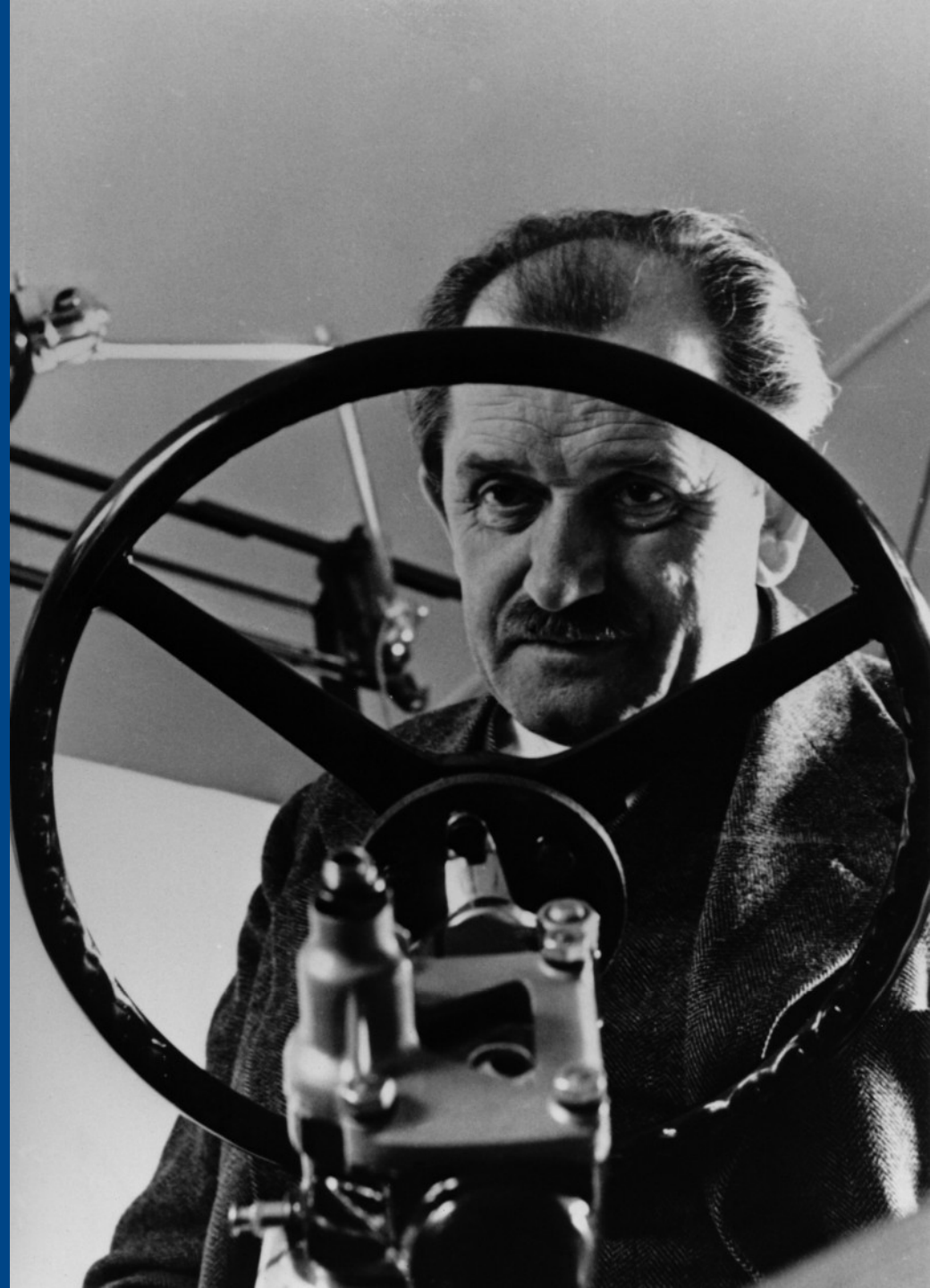
~ Mike Tyson

Ph.D. in industry

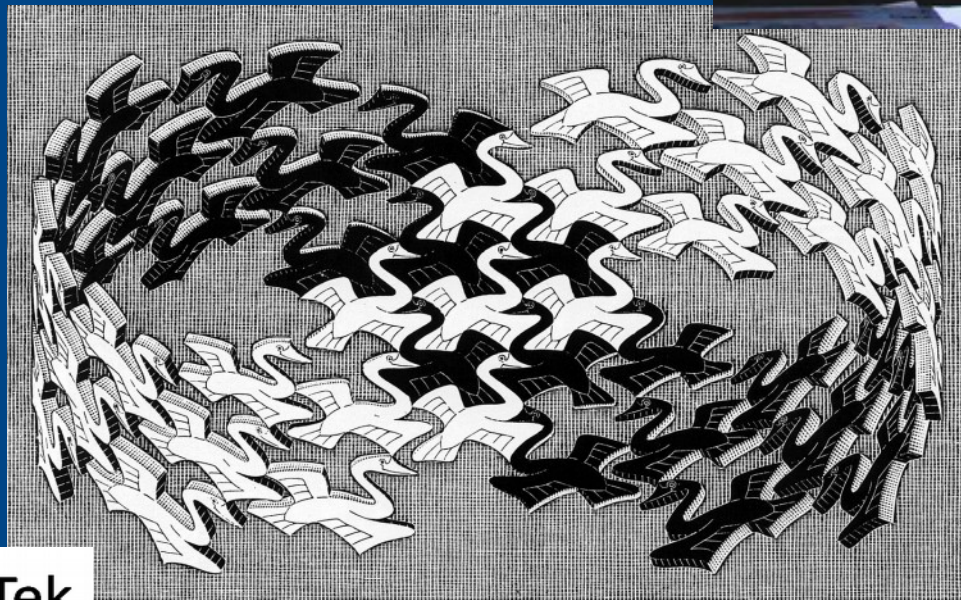
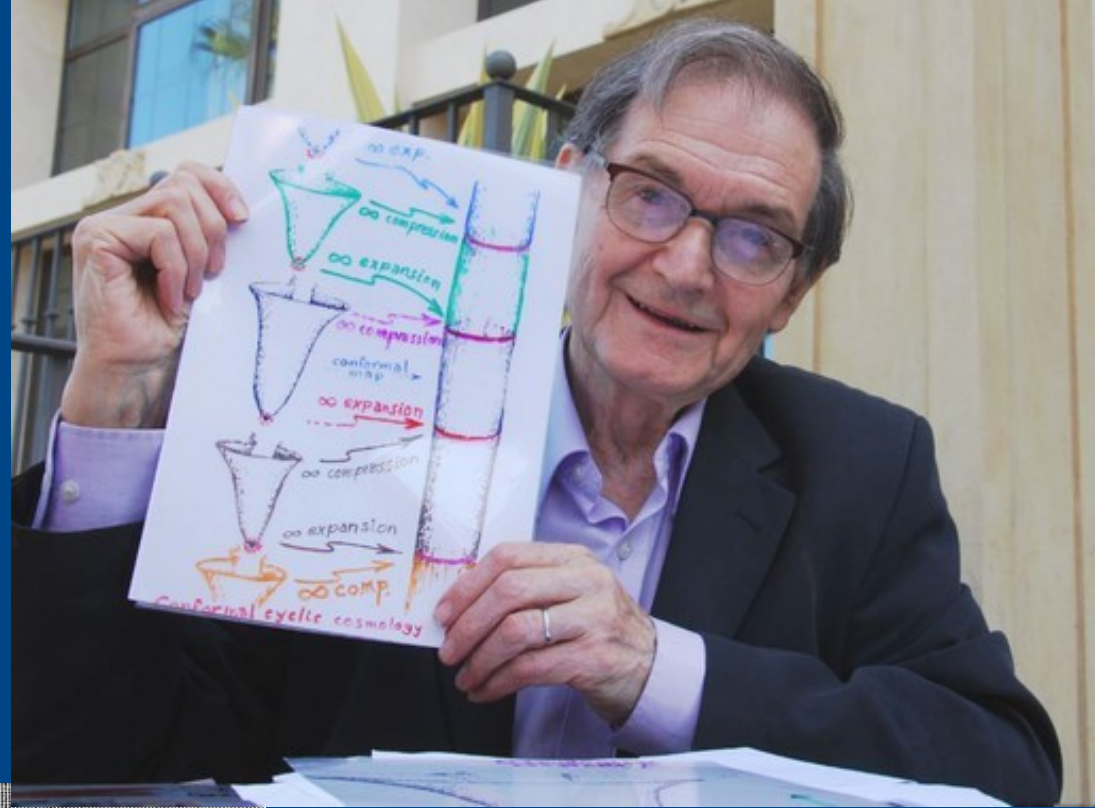
Most famous Ph.D.
in industry, *name?*

What is the point
in engaging Ph.D.
as product
designer?

Scolar,
researcher,
scientist
versus
Engineer,
ingénieur,
Ingegnere,
genie...



DO WE NEED PURE SPECIALISATION?



- ART appreciation skill allows to him to attack questions from different angle.

Roger Penrose

4. “Over-qualified” problem?

- The problem is that very few PhDs know how to leverage their PhD. Most of them just expect that world to be given to them on a silver platter. They think that Pfizer, GSK, or Baxter is going to come chase them down and say please work for us. When they realize this isn't going to happen, they call it quits and blame the system or the job market or the fact that big companies don't want to hire PhDs.
- Of course if you get online and search why a getting a PhD is a mistake you're going to find a thousand unemployed PhDs blaming their failure on the system. You're not going to find the thousands of employed PhDs who are happily employed in industry and making great money because they're busy being productive.

The future is yours !

The top three desired skills for every industry position are:

- critical thinking,
- complex problem solving,
- correct decision-making.

In other words, WE NEED the person ABLE to

- identify problems, including “*never-before*”
- find the cornerstone issue, and then
- find the right answer to that problem.

Isn't it the RESEARCHER profile?

The future is yours !

High-tech / Innovative entrepreneurship:

- Trained professionals who know how to create information / service / technology, not just study and repackage it, are desperately needed!
- We're faced with **new challenges** day in and day out that we're expected to **meet and overcome.**
- This should come as no surprise given the nature of our work - **continuous innovation.**

Teach them to embrace failures

They should *know and believe* that each failure would take them closer to getting the one piece of puzzle that would bring the whole picture to the world.

They should learn to wake up to fail again because *failure is the best teacher*
- failure never lies and always shows you what to do next.

5. THE PROBLEM TO ADDRESS IN FIRST-PLACE

- The problem is academics can become professors without any kind of management or collaborative skills training. As a result, some students get horrible mentors.

MENTORS should be able to teach their Ph.D. students TO PRACTICE:

- emotional intelligence
- personal growth
- collaborative / team work skills

“Collaboration is the Stuff of Growth”
~ Sir Ken Robinson

MASTER versus PH.D.

- *Masters* degree is granted to those who have *mastered* a field.
- PhD is granted (*supposedly*) to those who have added to a field.

Adding to a field is hard \Leftrightarrow innovation.

- NO TITLE to someone who just learned something and then repackaged it, compiled information.
- Ph.D. - candidate MUST create “information” - to bring new knowledge into existence for the very first time.

In the middle of uncertainty.

- During Ph.D. study you have no idea if your next grant is going to be funded.
- You have no idea if your paper is going to get passed that damn third reviewer and get published.
- You have no idea when your committee is going to give you the green light to defend your thesis.
- You don't even know if the project you're working on has an answer at all!
- **MUST-HAVE skill for any innovative business!**
- **Teach them to handle uncertainty and to leverage this skill for future high-tech career!**

Teach them to “sell” themselves

- Employers may thought Ph.D.'s are too independent and wouldn't be able to work with a team.
- During PhD study, they work very closely with other students. They had to compete for resources and for publications and they had to share resources and collaborate to get results.
- No one is more qualified than Ph.D. to work with a team.
- **Teach them to write informative CV**
- **Teach them to position themselves properly, ask the right questions, and get the job they want.**

They have the knowledge (*supposedly)

Were they taught for ability to acquire knowledge?

They should be taught **how to leverage the knowledge and skills they obtained**, how to apply it adequately to the task, **in practice**.

They must be trained to learn

- every moment they live,
- till the end of their lives.

Edward de Bono

= “Six Thinking Hats”, “Lateral Thinking”...

Genrikh Saulovich Altshuller

= “Theory of Inventive Problem Solving”, aka TRIZ

[English acronym - TIPS]

8. What we all really need to learn is.....



to LEARN !!