

Luca Maresi Head of Optics Section Logan – August 6, 2017





Creativity The Critical Element for Mission Success

Luca Maresi, Alessandro Zuccaro Marchi Logan 2015







Greatest inventions for human development



The axe was 'invented' in Kenya approx. 1,7 millions years ago

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STRENGTH

- More proteins
- Leading edge on others

WEAKENESS

Can be copied

OPPORTUNITIES

- manufacturing of rafts
- clearing of trees

THREATS

- Weapon against us.
- Other tribes can hunt

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Conclusion

Too easy to copy \rightarrow can endanger us \rightarrow let's keep it secret.

What's about sharing with others?

- Foster innovation
- Faster evolution of the society

How much should I protect the idea? Patent it, IPR protection, keep it secret?

What is good for my business, is it also good for the community where we operate?



















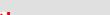














We can foster innovation with rewards

What's the impact on my team?

<u>It's MY idea</u>, \rightarrow people tend to be very secretive.





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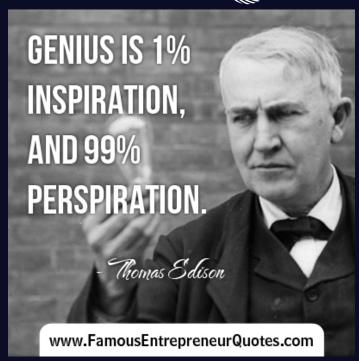




Having a good idea is not all of it.

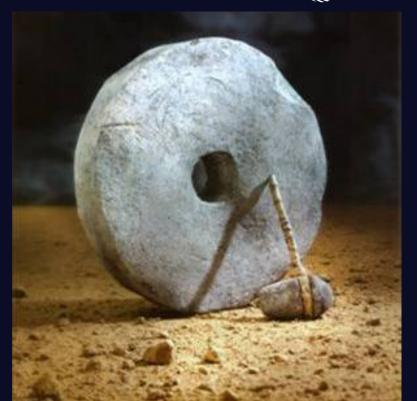
Getting it to work, and make it a market success is the real challenge.

→ you need all the team on-board to make a success from one idea.





You have a team when team members are interested in ideas that work, not in who suggested them































Should we bother at all to protect the idea? or we should move fast forward to the next design iteration?







In the fashion industry there are no IPR, no patent protection.

Only trade-mark protection.

The logo makes the difference



Fashion is 200B\$ business in US only



TED talk from Johanna Blakley.

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Without ownership there no incentive to innovate.

In reality No IPR is a strong incentive to innovate. Anybody can copy from each other, so there is a constant push to innovate.

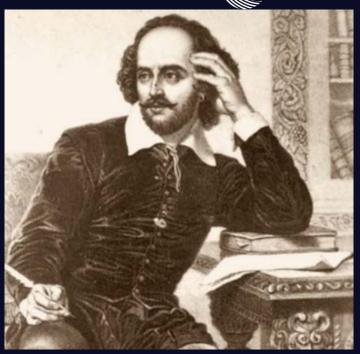
From whom do they copy?
Fashioners take inspiration from the street

 \rightarrow Users are the largest source of inspiration



Shakespeare, by modern standards, plagiarized many of his most famous works.

Taking inspiration from classic was not the important element.



→ To make a successful play was the real challenge





















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Who is the richest CANDY MAN in world?































Knowing the ingredients doesn't necessarily make you a chef of a Michelin-star restaurant.

To know how to put things together makes the difference.

Sometime we under-evaluate the 'system' work

The first jar of Nutella left the Ferrero factory on 20 April 1964.

Nutella sales today is 1 Million kilos per day























Boston's high-tech boomed in the in 1988.

Several companies were concentrated in Boston suburbs in an area called Route 128. making Boston the world capital of IT.



The area rapidly declined because Massachusetts law strictly enforced agreements (non-compete clause) that prohibit employees from taking jobs at competing companies

→ the non-compete clause chilled innovation and technological breakthroughs

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Established firms may benefit in the short term from the enforcement of non-compete agreements, but society loses.

Talents remains stuck in established firms, unable to job hop to new opportunities.

In the long run the local economical systems dries up of talents and ideas.





Firms invest more in worker development when they feel protected by non-compete clauses.

Workers who feel locked in a company invest less in self-training. This effect is dominant.



→ Restraining workers' mobility reduces the 'human capital'.



Brian Uzzi spent 5 years studying the group creativity of musicals.

What's better?

- > a close group of old friends who had long worked together
- a group of total strangers

He defined the Q factor, that defines the level of intimacy



→ A set of small groups new one to each other + some new elements is the best mix for creativity.

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Xerox established PARC in June 1970 as a West Coast extension of its research and development laboratories.

PARC is known to have pioneered the PC, graphical user interface (GUI), Ethernet LAN, Laser printing.

Xerox was not successful in commercializing PARC's technology, leaving the door open for Apple, IBM, Microsoft and others to capitalize on PARC's innovations.



- Xerox HQ believed that executives would never learn to type.
- PC, with a of 20,000\$, would be too expensive to give it to secretaries.

So who was going to buy one?

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Silicon Valley, the world's technology center, employees are largely free to move.

Non-compete agreements are forbidden.





"It's the mobility of our personnel that quickly diffuses knowledge" - Bob Noyce. Founder of Intel































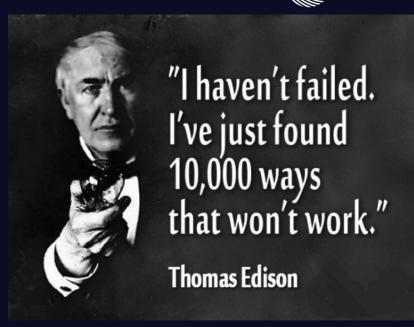
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Silicon valley mantra: fail fast, fast forward

Does it apply to the Small Sat / CubeSat & New Space?

Fast prototyping: design/test and implement your ideas: F1 is a good example

With satellites you still need to get to space & do the commissioning















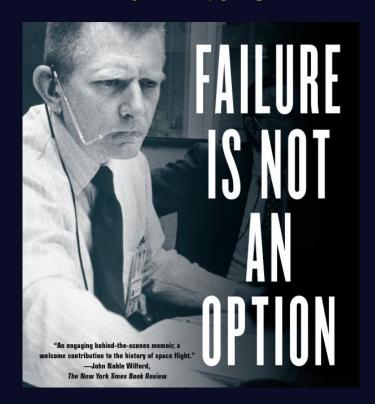


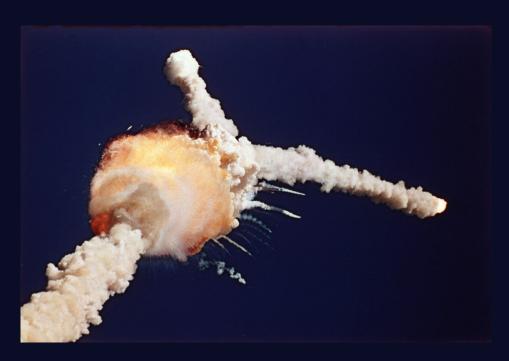












"you are never better than your last failure"

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It's about professional pride and personal involvement

I don't want MY project to fail





If you want to arrive first, you first need to arrive – Alex Thomson

The core part of the idea is not the idea itself, but to make sure it will work.

This is what you need to 'protect'.























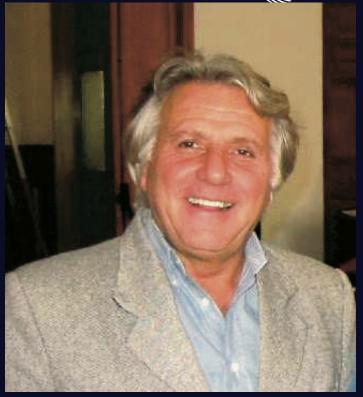






"By the time people understand what I'm doing, I'm already working on something different" – Luigi Galgani

























When you will be copied, remember that people will only get where you have already been.

They have no clue where you are going next.

























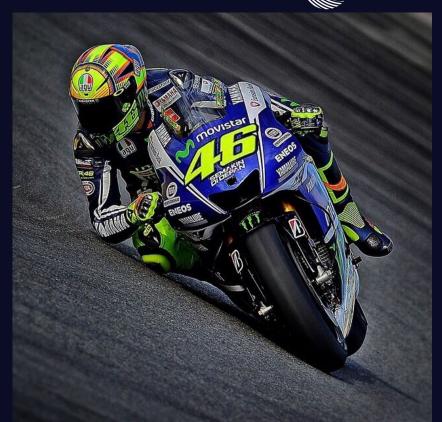


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Don't be smart, be fast.

→ you need champions.

Sometimes you need to be Smart & Fast

























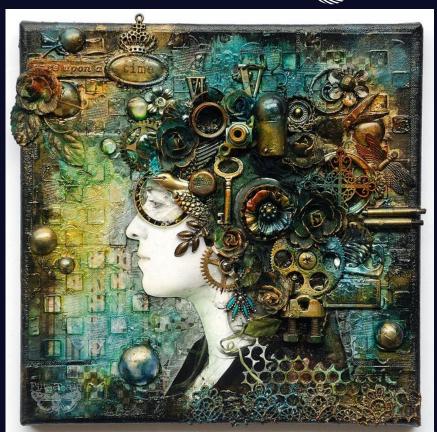




This presentation is not confused, messages are well mixed

#1. Do you prefer to spend resources to protect your ideas, or moving fast to the next one?

#2. Whatever you do, consider the impact on the 'corporate culture' and the image that others have about your company.



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#3. You need a team committed to get ideas on board.

#4. You can't see things until you admit to be blind.





You may be sitting on the next idea without noticing.

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#5. It's not about the idea, but the capabilities of your team to make it to work.































I think your idea of copying my idea, it's a very good idea.

– just quote me ;-)



























