



EUIPO

Investing in Deep Tech and Venture Building

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MONTE CARLO CAPITAL



Deep Tech Investing – EUIPO

Difficulties in turning intellectual property developed by universities into successful commercial applications is one of the greatest bottlenecks to the creation of world changing businesses, and ultimately growth and prosperity. But it is also an incredible opportunity for investors.

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MONTE CARLO CAPITAL



INTRO

The topics of Angel Investing and Tech Transfer are big ones.

This talk usually lasts anywhere between 1h and 2h and touches upon a number of other big topics that are linked to it:

- The “valley of death” in the financing of a startup,
- The challenges faced by angels in scaling up their own investments,
- The challenges faced by universities in promoting tech transfer,
- The misalignment of interest between early-stage investors/founders and VCs,
- and the challenges inherent in turning academic inventors into entrepreneurs.



INTRO

But we do not have the time to develop them all.

Instead, we will look at one of the many options available in tech transfer: the spinoff

More specifically, I will explain how I have built an investment strategy around the creation and financing of spinoffs, which now represent around half my group investments.



INTRO - MONTE CARLO CAPITAL

Both Angels and VCs bring something different to the financing of start ups, at different stages of the financing cycles.

However, inherently, both groups present both positive and negatives.

I have been building Monte Carlo Capital looking to be the best of both worlds.



INTRO

Funding cycle: founder money, bootstrapping, friends and family, business angels (seed,) then VCs (Series A, B etc)

Once proof of concept has been made, they need to raise more funds, anywhere between 500K and 2 Mio. This is typically too big for regular business angels and angel networks, and too small for venture capital funds.



INTRO - FINANCING CYCLE

Start ups around the world are facing this funding problem called the valley of death.

If you can invest in that quantum, you can find great businesses. They went through the angel financing, ready to take off, and yet and they can't find any money.



ANGEL INVESTORS





ANGEL INVESTING VS VENTURE CAPITAL

- Lets look at a few fundamental differences between angels and VCs
- EBAN numbers: Average Angel : EUR 25K per investment.
- Average investment per company for a business angel network: EUR 182K
- I found a couple of stats in the US, but number are not far off, may be slightly higher
- Average annual investment per Angel network: EUR 1.5 Mio.



ANGEL VS VENTURE CAPITAL

VC: 3rd Party Money – Fund Managers.

- VCs: (Series A and later) typically min investment of 2-3 Mio
- Value add and alignment of VCs is sometimes questioned
 - Interests not aligned with entrepreneurs and angels (onerous pref shares, time line of the fund)
 - Options for exits are more limited when VCs are involved
 - But of course there are some great VCs and they can bring significant capital
- As private investors, Angels' interests are more aligned with entrepreneurs.



FUNDING THE VALLEY OF DEATH FUNDING GAP

- Various definitions of the valley of death in start ups. Some say it's the entire period before a company is breaking even.
- I define it as the gap between the money regular angel groups can invest: 182K on average in Europe and where the VCs start coming in.
- A 1 Mio investment would on average require on average 40 angels
- Its typically the 500K- 2 Mio gap where great companies are struggling to raise money.
- Typically, proof of concept was made, the company need cash to expand fast, and they can't find it
- This is where the opportunity lies for the “super angels”. Funding great businesses at very attractive prices before they experience strong growth and a sharp increase in valuations.
- This is where we like to come in.



MONTE CARLO CAPITAL – HOW I BECAME AN ANGEL

- Investment Banking career – Ldn, Paris, Tokyo, Singapore and HK.
- HSBC, UBS, JPM, Commerzbank.
- Worked across asset classes, FX to Equity Derivatives, credit, commodity products, alternative investments. Last job: Ran all trading floors in Asia Pacific for Commerzbank, based in HK. 16 years in Asia.
- Stopped working in 2009 and started MCC to invest assets in private deals
 - Investing in early stage companies is most profitable as long as done properly.



MONTE CARLO CAPITAL – HOW I BECAME AN ANGEL

- Saw an opportunity:
 - I could find great businesses at great prices by focusing on the valley of death
 - I wanted to scale up by own investments. Angels struggle to scale up and usually become VCs, losing their edge as Angels as they compete against the VCs
 - By building a group of sophisticated investors and advisors located around the world, I could offer the best of angels and venture:
 - The ability to invest in amounts only available to venture funds
 - Bringing in a global support of experts usually only found in larger VCs.
 - Whilst remaining a group of private investors



MONTE CARLO CAPITAL – HOW WE WORK

- . 1st ticket 500K of 1.5 Mio at late seed. I also lead follow-ons
- . For example I am currently leading a 9 Mio USD investment series B investment in Paragen a medical device company. I am also leading a 1 Mio USD seed investment in TegoSens, a medical diagnostic company. And we have just closed a 10 Mio USD financing in NikolaLabs, a IoT firm.
- . I lead every investment of my group but I occasionally co-invest with other leads.
- . \$5-15M of investment a year currently and working on increasing that by expanding our access to capital
later stage investments



MONTE CARLO CAPITAL – WHAT WE DO

- . As businesses grow, we bring in later stage investors, usually families who prefer

Result:

- . 20 Businesses seeded last 6 years. 18 businesses have increased in valuation.
- . I have made 10 investments last 12 months. 3 new companies, the rest are follow-ons.
- . Recent exit at \$195M + milestones, 3 years from investing at seed.
- . I am currently working on the IPO of a company we seeded 4 years ago.



MONTE CARLO CAPITAL – WHAT WE DO

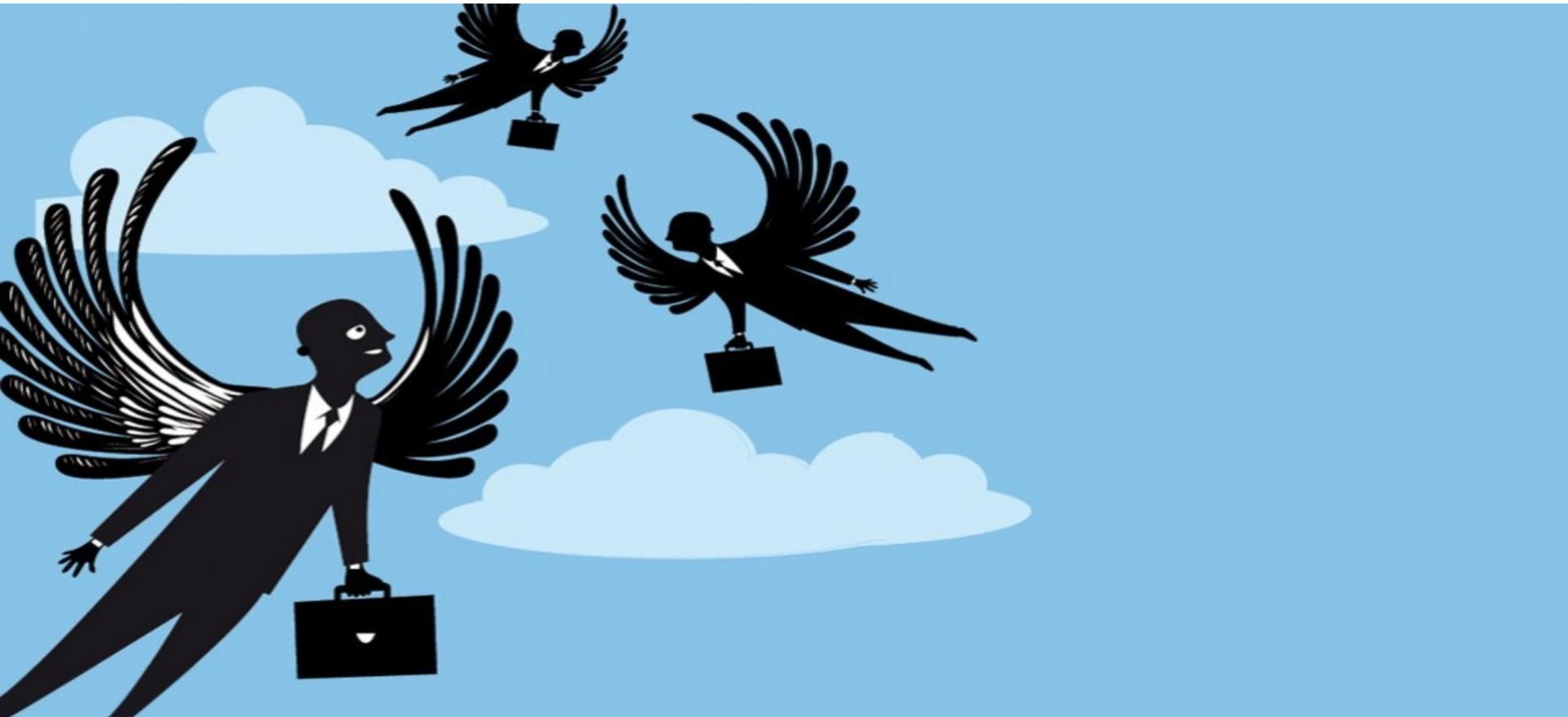
- . Our portfolio companies have raised \$ 100M last 12 month and I'm expecting \$50-100M in financing need across companies every year.

Ambition: Funding the best businesses all the way to exit:

- . Makes an even more appealing investor to companies,
- . Allows us to derisk our investments further through growth stage



HOW WE DO IT





BUILDING A DEAL FLOW

I See 1000 “qualified” business plans per annum “from people I know or referrals”

I see a lot more though business plans competition, associations etc

I want to find the best businesses.

So how do we find the best businesses:

>> Building visibility so that we are found by the best businesses, and by building an ecosystem

>> Show to be relevant to the founders

Ability to invest

Ability to help the company all the way to the exit

(More on this later)

>> I spend a considerable amount of time working on the deal flow



BUILDING A DEAL FLOW

Involved in the early stage ecosystem

- Joined EBAN, the European trade association for business angels and early stage investors and represents 30,000 business angel networks in 50 countries
 - EBAN board member

Board Member of the Monaco Venture Capital Association.

Speak at conferences all year

Teaching

- Adjunct-professor of VC at the International University of Monaco to MBA and Masters Student



BUILDING A DEAL FLOW

Advisors:

- Advisors across numerous sectors, in various parts of the world
- 2 big pharma exec, CEO of biotech start ups
- CEO of portfolio companies
- Manufacturing in China

Investors:

Serial entrepreneurs, hedge funds managers, family offices etc who all open door

This brings me visibility, deal flow, and a great network of people helping in all sorts of ways.

All investments where done through this ecosystem built over years



1ST FILTER – HOW TO SELECT FROM 1000 DEALS?





1ST FILTER – HOW TO SELECT FROM 1000 DEALS?

Getting from 1000 to 5 deals we invest here is the next critical step.
Debate on what matters most: jockey, horse, market. For me: the 3

Horse

- Businesses that do something that no-one in the world knows how to do:
 - Solve big problems and back by IP: Biotech, pharma, medical device, IoT, Robotics, AI >> deep tech
 - If the business is competing, I m looking for the smart guy in the room that will disrupt the industry: faster, cheaper, better. If I cant clearly feel Ive identified the winner I don't invest
- Prefer pain killers to vitamins (solve problems)
- Exit potential in the 100s of Mio



1ST FILTER – HOW TO SELECT FROM 1000 DEALS?

The Jockey

Experience team has greater chance of success

The Market

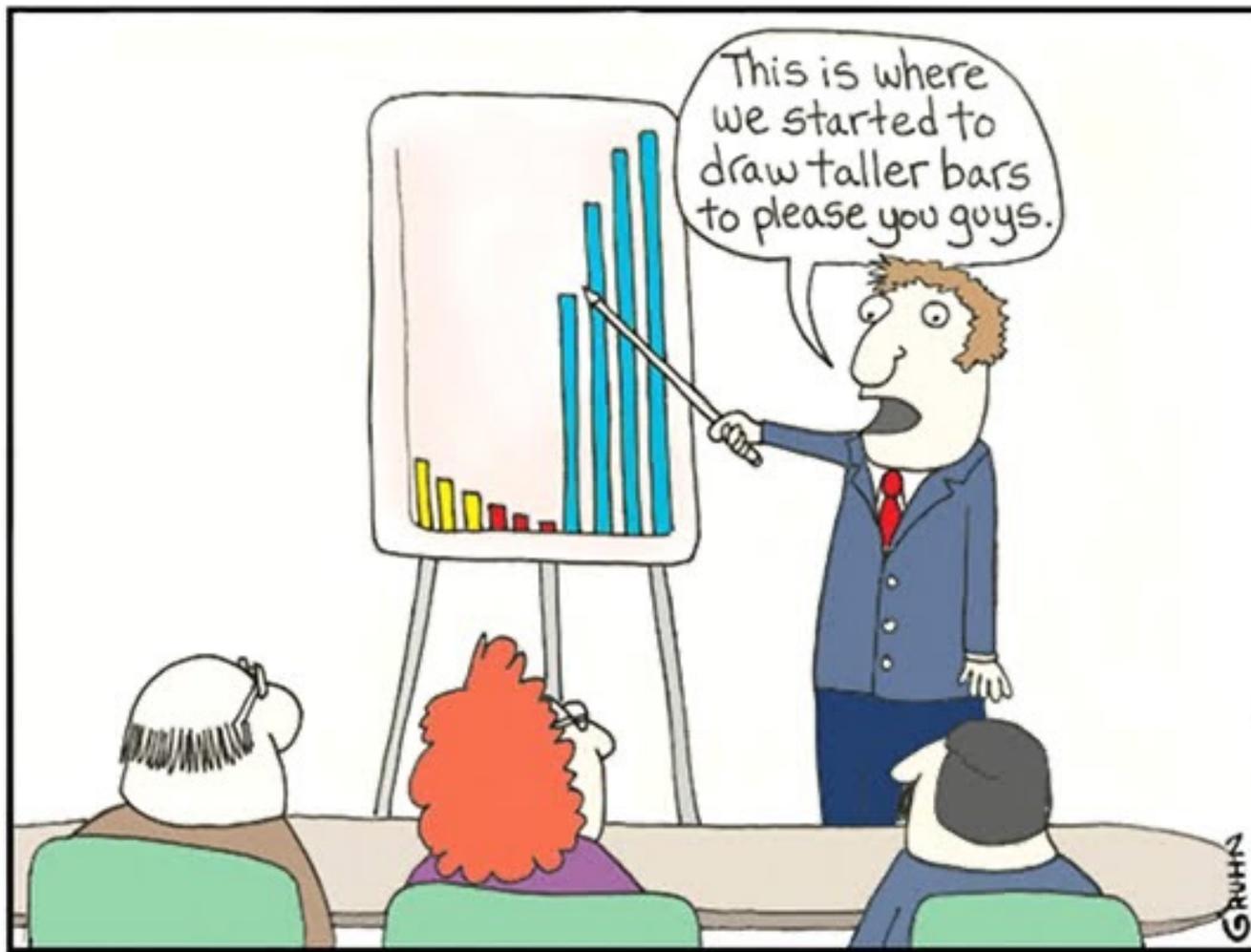
Size of the opportunity

- Min 20X target on each investment. Usually higher as want significant upside for our co-investors coming later

1st filter >> 90-95% of companies drop out



DEEP DIVE DUE DILIGENCE





DEEP DIVE DUE DILIGENCE

In essence look at anything I think is worth looking at.

2 main parts:

1. Understanding the business, the market it is addressing, competition, challenges to growth, detailed financials projections, etc.

>> Most CEOs can't articulate what their business do in a clear fashion

2. Once 1 is satisfied: check everything we were told

>> Importance of advisors



DEEP DIVE DUE DILIGENCE

- The DD process involves asking a lot of questions to evaluate business, the legal structure, the financial plans, and risks of the business.
- I spend a lot of time doing DD
- Also involves doing independent analysis of the business using any available resources, from doing internet searches, to using advisors.
- Entails looking for winning features in a business, as well as deal killers to avoid wasting time.
- The earlier stage the company, the less a business to look at
- More art than science



DEEP DIVE DUE DILIGENCE

- For deep tech particularly
 - Uniqueness of the tech and is it solving a problem better than anything else
 - Is the tech working? If not, how long and how much till we have demonstration it works and what is the risk (varies for each industry)
 - IP strategy: Who owns the IP? Have patent applications been filed? Obtained? What is the IP on? Is the IP strong? Is the company going the trade secret route instead?
 - For University Spinoff, what are the terms of the licensing agreement? Milestones to be achieved to keep the license? Milestones payments? etc
 - Importance of advisors
 - you invest and how dual tax treaties affect you.



DEAL STRUCTURING





CLOSING THE INVESTMENT

- Im usually the lead investor: negotiate terms and the structure, make an offer and write the first check as investor
- Invest directly and bring co-investors. We all invest directly
- We usually take an entire seed round > negotiating power



WORKING WITH THE COMPANY: ACTIVE INVESTORS

We are active

- If lead investors: appoint someone on board/advisory board

We help with

- Corporate strategy
- Funding (current + subsequent)
- Bringing in CFO, COO
- Find manufacturers in Asia
- Introducing clients
- Introducing deal partners
- Exit

We do that to:

- The more we help the more we mitigate risk and increase success



TECH TRANSFER AND VENTURE BUILDING





TECH TRANSFER - DEFINITIONS

Technology transfer:

>> transfer of academic research results to the industry in view of their translation into commercial products and services

Many avenues to transfer tech.

Our focus here is on University Spinoff (also called a spinout):

Spin off:

A company created to develop or exploit the IP developed by a university, with a formal contractual relationship for the use of this IP. The spinoff is typically funded by third party capital (e.g., angel investors, VCs, etc.).



UNIVERSITY TECH TRANSFER

- Deal flow is critical: We all look for the next big things
- The next big things are already there: sitting somewhere in a file at a university
- Some data to provide a sense of scale:
US: R&D expenditures by US colleges and universities was around \$80 billion in 2019, with close to 95 percent going into science and engineering .

In Europe, the EUR 70 Bio 7ear Horizon 2020 program is followed by the EUR 100 Bio Horizon Europe program



UNIVERSITY TECH TRANSFER

Simple maths:

- . \$100s of billions granted to universities around the world.
- . financing some of the leading minds and research labs.

>> surely must be the best place to find incredible tech startups that will change the world?

>> Yet, universities are, at large, struggling to translate IP into commercial applications



UNIVERSITY TECH TRANSFER

The challenges are known and a number of report dig into those:

- Lack of awareness from scientists of the mechanism of tech transfer and lack of or understanding of the incentivisation to them
- Lack of experience of tech transfer offices
- Lack of link between academia and business
- etc

>> One key challenge: turning a brilliant inventor into a successful entrepreneur.



UNIVERSITY TECH TRANSFER

Main route to create spin off:

- Turn an inventor into an entrepreneur.
- Entire ecosystem is built around this:
 - Providing business education to scientists,
 - Creating incubators and accelerators inside universities
 - Building an ecosystem of mentors and support around those entrepreneurs, etc.

However, I think this is a fundamental challenge upon which the entire ecosystem is based on:

- A PhD in physics, a great tech idea and some training on entrepreneurship is no guarantee to turn a 25-year-old into the next Bill Gates.
- A lot of the IP is produced not by 25-year-olds, but by experienced researchers with long tenure who have no interest in becoming an entrepreneur.
- Many scientists don't want to become entrepreneurs.



UNIVERSITY TECH TRANSFER

- Building a great business needs a great tech, a great team that can execute and money.
- One key challenge of successful tech transfer comes from the challenges of identifying tech entrepreneurs who are capable of building a successful tech business.
- One solution is tech venture building. This is where my partnership with US based venture builder Ikove comes in.



VENTURE BUILDING

I have teamed up with US-based Iko Capital to seek world changing IP and turn them into businesses:

The difference: We don't invest in other's businesses. We build them ourselves:

Team of 30 people in a "Startup Nursery" based in the US whose job is sourcing IP and building businesses:

- Liaison with tech transfer offices and researchers
- Tech team scouting through 100s of IP and looking to determine if:
 - o The tech actually works (or is very likely to work) (We license tech at TRL 4-5)
 - o It's solving a big problem better than anything out there
 - o The market is big enough that we can build a \$100M+ business within 5 to 7 years
 - o We can build a team



VENTURE BUILDING

- Full time lawyer (from IP licensing to company set up).
- Entrepreneurs in residence (support businesses across different verticals, from SaaS to manufacturing)
- Business development: support businesses in their growth

- Once a great technology has been identified, license is negotiated with university.
 - A new company is created: it's a spinoff
 - University inventor gets equity in spinoff.
 - Outside investors come in
 - I have been the lead investor in most of the 20 businesses coming from the group.
 - The businesses are in artificial intelligence, medical devices, IoT and robotics.



VENTURE BUILDING

To keep building on this:

- We launched a fund in 2019 (the Startup Nursery fund), to finance the creation of the next dozen businesses using the same process. As of April 2021, we have launched 10 new businesses, on top of the 10 previous launched, and the fund and the Fund IRR is currently 41%.

>>Key is: we don't invest in deep tech startups.

- We don't invest in an inventor turned entrepreneur.
- Ikove builds businesses with significant dedicated resources that look to systematise and de-risk the whole process, from startup all the way to exit.
- Both inventors and universities are incentivized by getting an equity stake.



VENTURE BUILDING

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 - A new company is created: it's a spinoff
 - University and the scientist get equity in spinoff.
 - Outside investors come in
 - I have been the lead investor in eight of the 10 businesses coming from the group.
 - The businesses are in artificial intelligence, medical devices, IoT and robotics.



VENTURE BUILDING

>> MCC has first right of refusal on any financing
The Start Up Nursery is one of MCC deal flow.
Expect half our investments will come from there

>> 3 main risks in deep tech investing

- Tech, people (implementation, IP strategy etc) and financing
- With the process we have implemented, we are looking to derisk the whole process



VENTURE BUILDING

Gigantic arbitrage:

EXAMPLE:

- Lead in a spinoff from one of the top 10 research labs in the world in AI
- 100 researchers
- World leading AI tech
- Worldwide licensing agreement on all IP we need for our business and first right of refusal on all IP from the research lab

>> Significant benefits for all the parties involved:



VENTURE BUILDING – BENEFITS FOR INVESTORS

For the Investor:

1. Tech risk:

We can pick great tech by having a significant IP deal flow and a deep tech focused due diligence team. Professor Lee, partner and CTO, runs the DD and has been a professor for 30 years and the former Dean of the electrical and computing department of Ohio State University

2. People / execution risk:

Wobbliness of a startup comes from people, their interactions, and the sheer quantity of tasks an entrepreneur has to deal with.



VENTURE BUILDING – BENEFITS FOR INVESTORS

A 25 strong team focused on the initial IP identification, DD, providing support to each business

>> de-risking substantially the people/execution risk that kills most businesses.

>> This team is dedicated to the venture building process.

Once spun-off, each business hires its own staff. However, the Startup Nursery team keeps supporting each business, providing economies of scale in terms of costs and support.

3. Financing risk:

Given MCC investment strategy, investing at the “valley of death” stage and leading follow-ons, the funding question is addressed (as long as the company keeps performing).



VENTURE BUILDING – BENEFITS FOR UNIVERSITY

- >> Significantly higher success rate than a typical spin-off that requires grooming an inventor, building a team, financing etc
- >> University can show some success turning those millions in funding into great businesses, increase its visibility, etc



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