

HIGH-TECH GRÜNDERFONDS

Science for Life – Financing
Webinar

Dr. Marianne Mertens



Agenda

1

Mission of the HTGF funds

2

Financing options

3

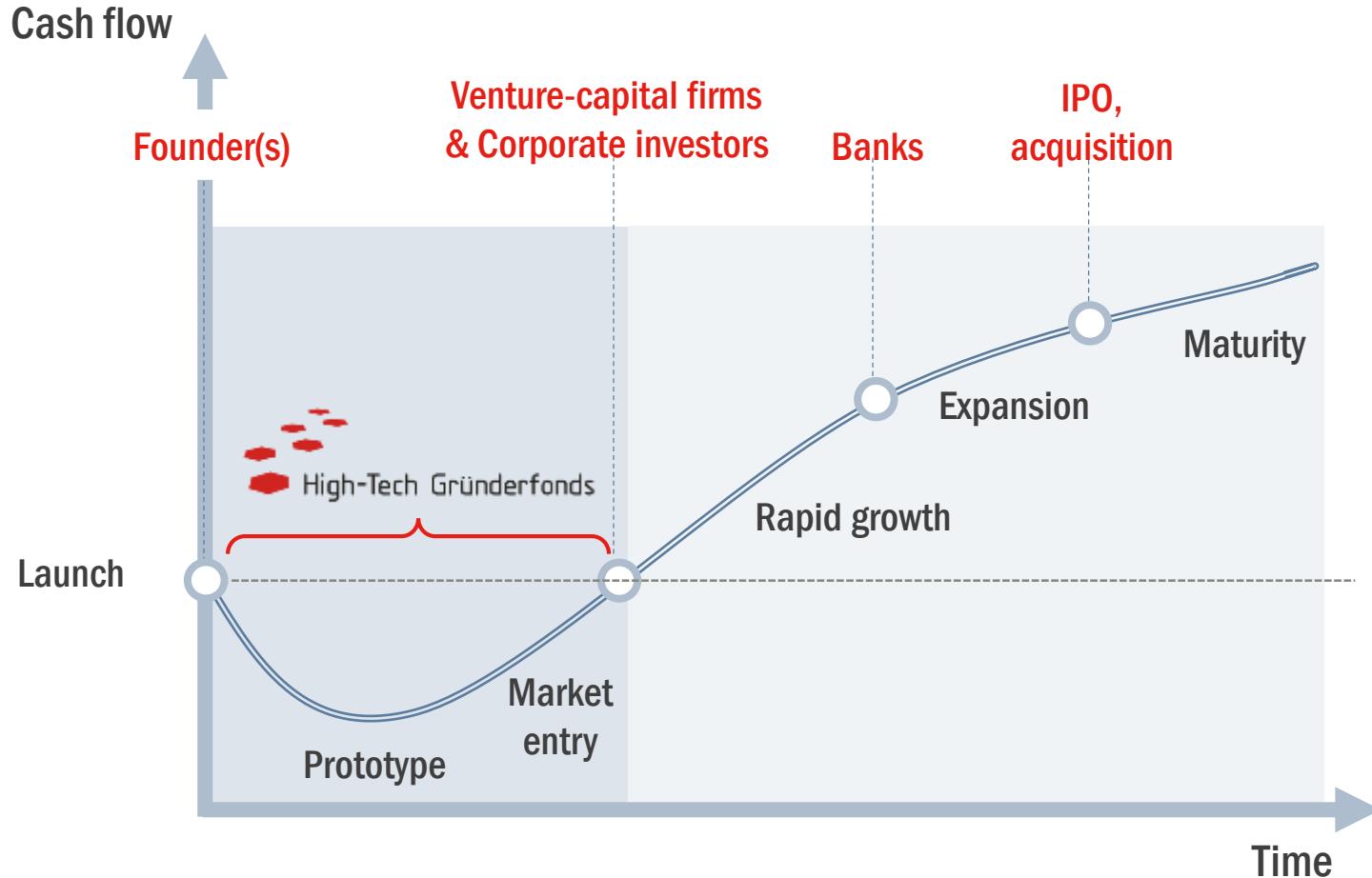
DOS and DON'Ts

Financing in the start-up phase – so far: The enthusiastic founder is often knocked back by the capital market



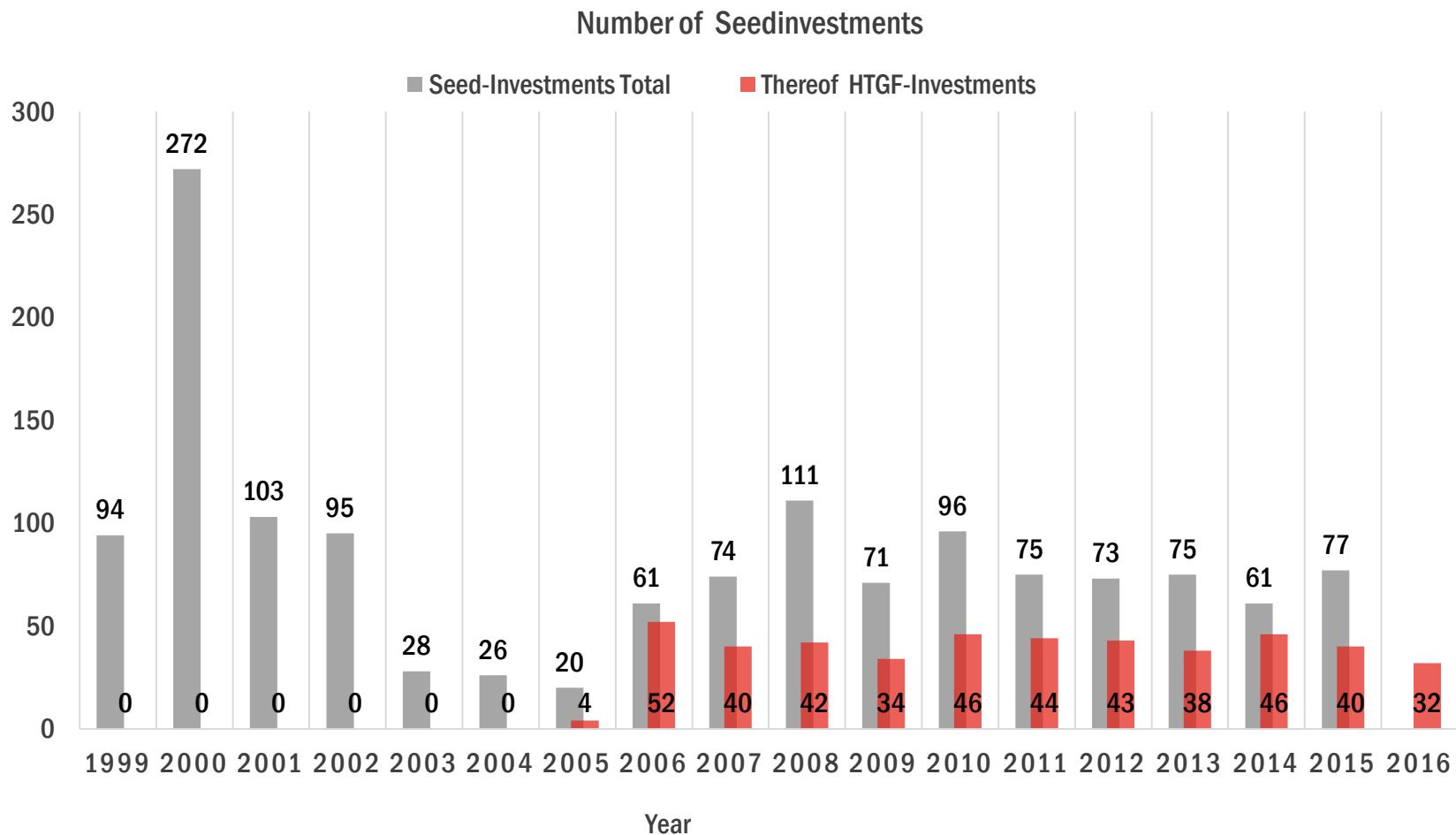
Too many ideas, not enough start-up capital?

VC maturity fostered by HTGF investment



Development of the seed market in Germany according to BVK*

HTGF serves as a key pillar of the seed business, with approx. 40% market share



*Source: BVK = German Private Equity and Venture Capital Association

*Reference: BVK = Bundesverband deutscher Kapitalbeteiligungsgesellschaften

As of: 01/03/2017

High-Tech Gründerfonds I and II

Key Facts

Founded

2005

Volume

€272 million

Investors



Founded

2011

Volume

€304 million

Investors



Term

6-year investment phase, 7-year divestment phase

Focus

Innovative high-tech companies in the seed phase (operative start < 1 year)

Investment type

Up to €2.0 million per company, thereof €0.6 million in the seed round

Value added

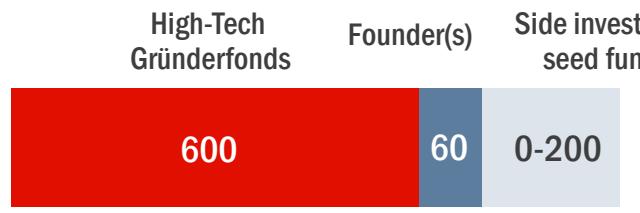
Hands-on operational support provided by experts and networks,
as well as strategic support from investment managers

HTGF's flexible financing models



Standard model

- Up to €0.6 million in seed financing
- 15% company shares plus shareholder loan with subordination agreement and conversion right (as dilution protection) and deferred interest

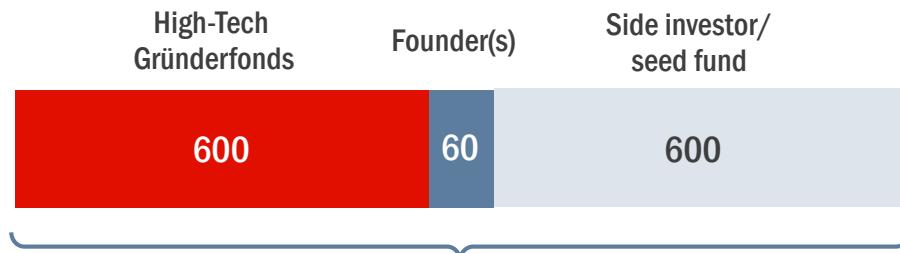


$$= \Sigma €0.8m$$



Pari-passu model

- Reflection of the conditions of a co-lead investor



$$= \Sigma €1.26m$$

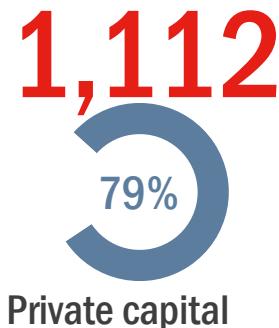
Founders' own funds in both scenarios is at least 10% based on HTGF investment

Results

Portfolio - Follow-up financing & exits



464
technology firms
financed



Rounds of follow-up financing with an external total volume of **€ 1.405 bn**, comprising

€ 486,6 million
from foreign investors
in 126 firms

€311million

of capital invested
through HTGF (I & II)



51
Real
millionaires



104
Millionaires
on paper

HTGF as lead for exit



77%

75

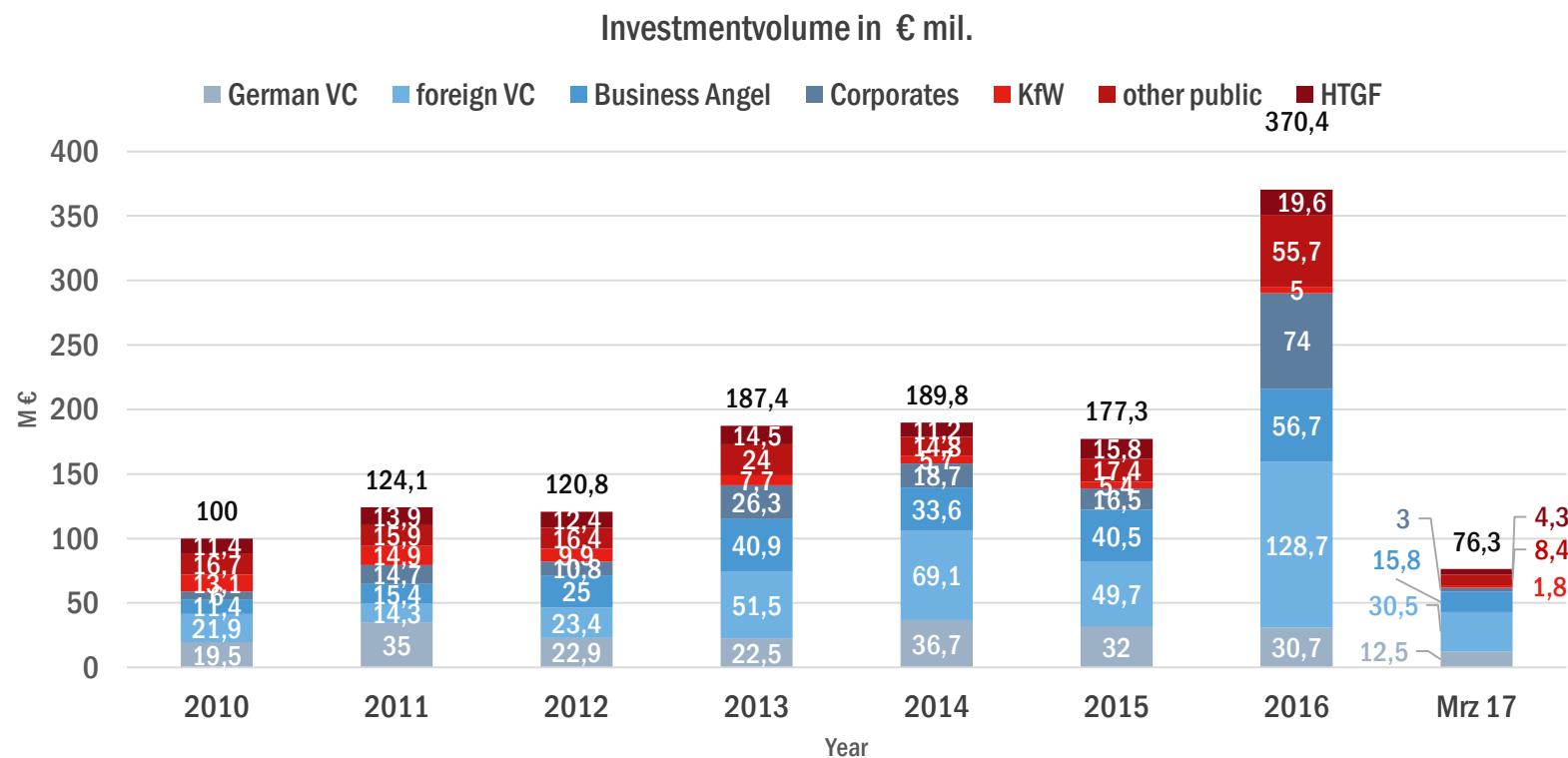
Exits (15 in Fund II)

4

Partial exits
(including two in Fund II)

As of: 01/04/2017

Since 2012, private investors have been spending more in the HTGF portfolio than German VCs



In 1,112 follow-up financing rounds, a total of approx. € 1.405 billion was raised from third-party sources (without HTGF funds) for the portfolio companies.

As of: 01/03/2017

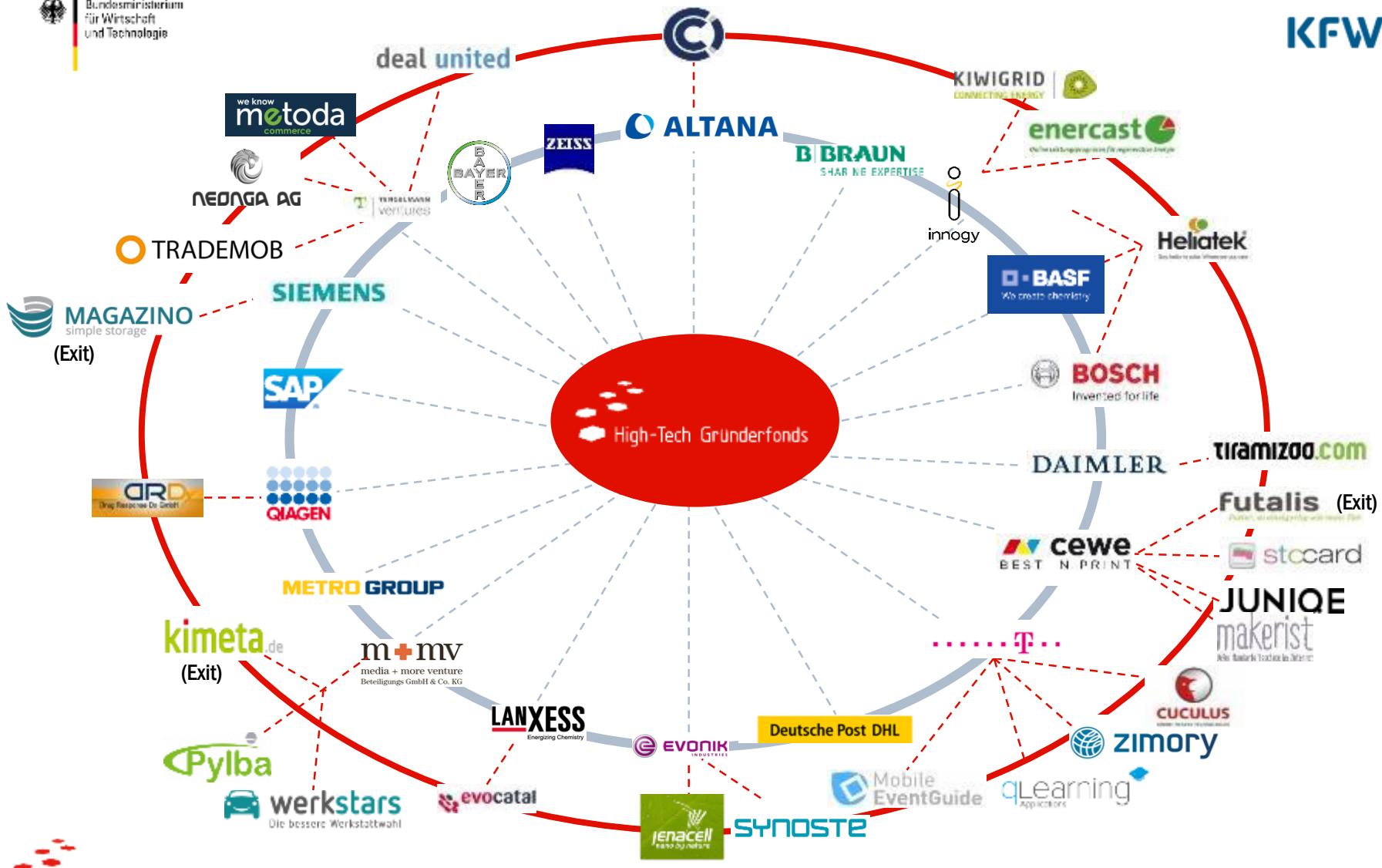
75 exits successfully accomplished, including 17 from Fund II average 2.5x – highest 7x



Transactions with private fund investors



KFW



Successful events for all network partners



Family Day is Germany's leading start-up conference, with over 1,000 participants



1,400 pre-arranged one-on-one meetings with network partners



239 industry **decision-makers** meet 90 portfolio companies



Over 700 arranged one-on-one meetings designed to facilitate business relations



Exclusive HTGF network comprising **400 wealthy private investors**



Of these, **199 private investors** have invested **€188 million** in the HTGF portfolio



Agenda

1

Mission of the HTGF funds

2

Financing options

3

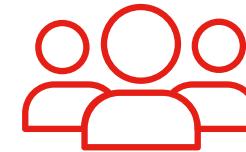
DOS and DON'Ts

VC model from various perspectives



Technology company

- Venture capital for tech development, market launch and growth
- Networking (e.g. experts, other portfolio firms, customers and possibly strategists)
- Partners to bounce ideas off & advisers
- Improved access to follow-up investments



Investor

- Stakes in companies with above-average market prospects and high implementation risk
- Information rights & guarantees
- Co-determination and control rights
- Portfolio effects (diversification and synergies)

Common Goals

- Successful company
- Value of stakes increase
- Exit proceeds!

Maturity stages of high-tech start-ups and financing options

Stage	Preparing for founding phase	Founding phase (seed)	Start-up	Growth	Establishing firm on the market
Duration	0.5-2 years	1-2 years	3-5 years.	0.5-2 years	5-X years
Goals	Brainstorming Concept R&D Patents Business plan (First draft)	Shaping company structure Staff Business plan Tech development Proof of concept	Tech optimisation Market preparation Production stage Studies Key clients	Production Sales Market share Cooperation Licensing Studies	Internationalisation Consolidation Diversification Portfolio expansion Acquisitions Spin-offs
Funding sources (e.g.)					
	High-Tech Gründerfonds			ERP programmes (e.g. start-up fund, fund of funds)	
		Venture capital (conventional VC, PIPE)			Strategic investors, cooperation partners
			Regional seed funds		Stock market: IPO, capital increase, bonds, etc.
			Business angels		Bank loans
				Equity capital	R&D subsidy programmes
				Funding programmes offered by German ministry for education and research, e.g. EXIST founder grant & research transfer, GO-Bio	



Agenda

1

Mission of the HTGF funds

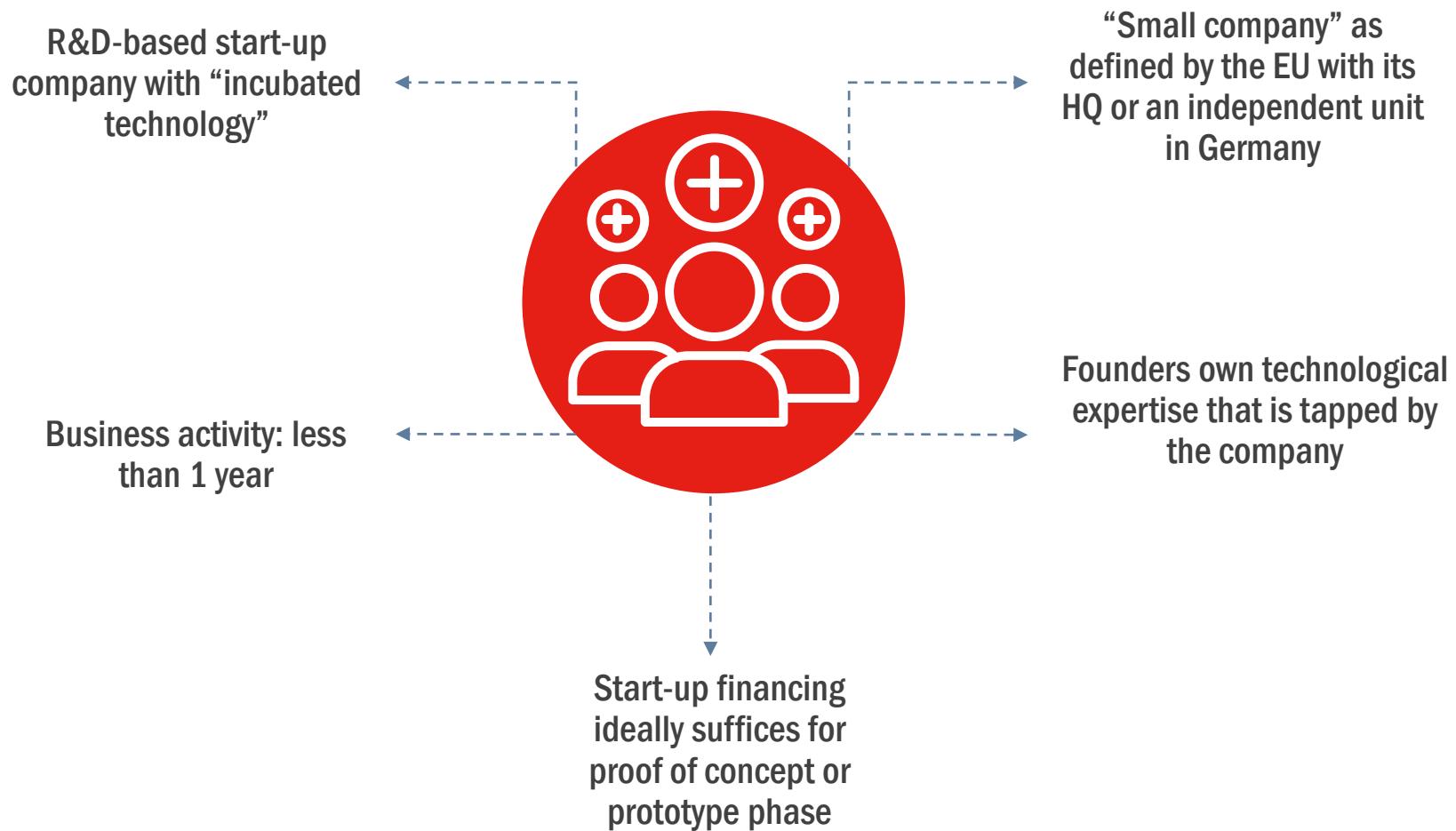
2

Financing options

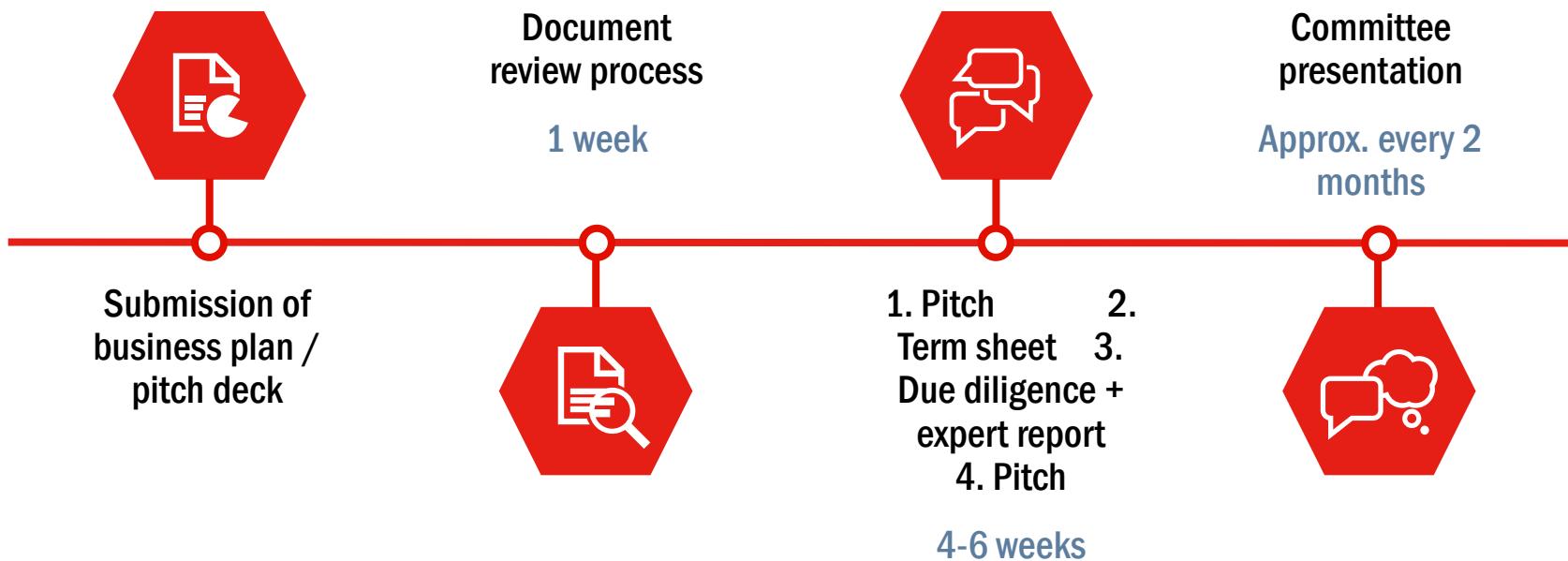
3

DOs and DON'Ts

Focus: Innovative, disruptive technology start-ups



Transparent and efficient selection process



Search for capital (I)

Who is the right investor?

- Commitment (financial & advisory)
- Risk-adjusted framework
- Trust
- Understanding of the industry
- Network
 - Side and follow-up investors
 - Customers & cooperation partners
 - Experts & advisers
 - Experts
- Track record & reputation
- Decision-making speed
- Availability (time & geographically)



Capital search (II)

The path to the investor

- If possible, be WELL prepared:
- Formal criteria fulfilled (industry, maturity, HQ, etc.)?
 - Internet research, press releases
 - Take a look at portfolio companies
 - Take note of fund duration
 - Business plan up to date?
 - Presentation ready?
- Talk to investment managers at start-up forums, specialist conferences, VC meetings, pitch events
- Business plan competition
- Submit documents (referees?)
- Be brave!



The business plan from the investor's point of view

DOs

- Clearly structured (Exec Sum)
- Complete business plan
- Competitive analysis that is in line with market outlook, evidence for assumptions made (!)
- Realistic planning & scenario calculations
- Self-critical analysis of weaknesses
- Summarising images & tables



DON'Ts

- Rudimentary / incomplete business plan
- Prose-focussed
- Language mix (by chapter)
- Preliminary versions (unrequested)

Criteria for a positive investment decision

Negative	Positive
<ul style="list-style-type: none">• Rudimentary / incomplete business plan	<ul style="list-style-type: none">• Realistic planning & scenario calculations: High level of innovation and strategic competitive edge
<ul style="list-style-type: none">• Competitive advantage not protected by IP nor a development edge	<ul style="list-style-type: none">• Sustainable USPs (IP!)
<ul style="list-style-type: none">• Solutions in search of problems	<ul style="list-style-type: none">• Clearly visibly customer benefits
<ul style="list-style-type: none">• Resistance to advice / Feelings of omnipotence• No or very little financial commitment on the part of the founders	<ul style="list-style-type: none">• Founder personality/-ies with commitment• Self-critical analysis of weaknesses
<ul style="list-style-type: none">• Utopian revenue & earnings planning• “Viral” marketing assumption, “Good products will prevail”	<ul style="list-style-type: none">• High-growth market with entry barriers for competitors

“Red flags”: Early indicators of risk for existing investments

Ability to deliver/performance

- Key milestones are missed, orders considered secure are lost, agreed revenue targets are missed
- Reporting too late, incomplete
- Investor information requirements are not fulfilled (keeping quiet about difficulties, “differential” communication)

Harmony within the team

- Fluctuation or dispute among company management
- Continuously failing to fill key positions

Mindset/start-up mentality

- Side-project attitude
- Focus on external image & status symbols (premises, company cars, press appearances)
- Early attempt to push through complex corporate structures and/or high valuations
- Reluctance to share control of the company



A few general rules (not only) for founders

Rule 1: Self-employment involves you and a lot of hard work, all the time

Rule 2: “Fail to prepare, prepare to fail”

Rule 3: Don’t let greed dominate your thinking

Rule 4: “Keep your chin up!”



A strong team – one goal – great potential

Investment team 31 employees, 32% of whom are women

Experience: 45% founders | 183 years of investment experience | 317 years of professional experience

Professional background:

- 52% have a scientific background
- 41% have a commercial background
- 7% have a legal background
- 17 different degrees (incl. science, engineering, economics, law, humanities and many more)

- Fund controlling: 6 employees
- Relationship management, PR: 4 employees
- Office: 5 employees
- Management: 2

Managing Directors



Hardware, Automation, Optical Technologies, Energy, Ind. Software



Life Science, Materials Science, Healthcare, Chemical



Telecommunications, Software, Media, Internet, e-Commerce



Controlling



Relationship Management, Marketing/Communication, Office



Hardware | Automation | Optical Technologies | Energy | Industrial Software

Applications

Industrial Software	Mobility	Virtual & Augmented Reality	Software	TelCo	Illumination Projection Audio
Fodjan ⁴ Sablono ³ SimScale	Soley SE.M. [*] LABS SOTA Solutions ⁴ Yatta	Autoaid Comodule [*] FAZUA ParkTAG ³ T Dispatch ³	4tiitoo Gestigon ImmerSight Inreal Enscape [*]	cloudplan [*] EcoIntense ^{3/4} WeSustain ^{3/4}	CommSolid [*]
Access				Automation	Logistics
Baimos Cliqloc FIDLOCK Jenetic				Cevotec Cuciniale SCHAD	Cubical

Tech / Infrastructure

Production	ALS Böhner-EH Cevotec Compositence eGym ³ Limata ⁴ Multiph. Optics Notion Systems PicolAS Pulsar Photonics *
Additive Manufacturing	ALL3DP ³ IQ evolution ⁴ Limata ⁴ Notion Systems ⁴ Print2Taste *
Robotics	ALS Cevotec Revobotic Synapticon Adlatus Robotics *
Recycling	akovla Technologies Saperatec ⁴
Energy Management	Cuculus ³ energcast Enexion ³ NEXT Kraftwerke ³ NOVUM Oneshore* Permundo Solandeo*
Metrology	Luceo Technologies Somonic ⁴
Optical Metrology	Cycle [*] Enoware [*]
Semiconductor	Extoll Interposers ⁴
Energy Generation Storage	Multiph.Opt. ⁴ SciEngines Limata ⁴
Sensornetworks	Custom Cells Itzehoe ^{2/4} Heliatek ⁴ Smart Hydro Power Subitec ^{2/4}
Security	Commodo Jenetic
	SciEngines



Chemistry-related Portfolio

Energy & Cleantech

Energy-Generation /
-Storage
Custom Cells Itzehoe | Heliatek

Recycling
saperatec | subitec

Water
akvola Technologies |
Dust Biosolutions*

Bio-based Economy

Enzymes-Plattforms & Specialties
c-LEcta | evoxx

Feed & Nutrition
Cysal | Fodjan* |
PerformaNat*

Enabler
EcoIntense | Hapila |
SOTA Solutions

Urbanization New Materials related Technologies

3D-Printing /
Lithography-Technologies
interposers | IQ evolution |
Limata | MeCuris* | Multiphoton Optics

Surface-Technologies
Bubbles & beyond |
i3 Membranes |
Notion Systems

Composite materials &
fibers
compositence | Jenacell |
WPX

Agriculture

Breeding- and Protection-Solutions
Computomics* | multiBIND | Oaklabs

Animal health
PerformaNat*

Processes & Software

Sensors & Simulation
Bentekk* | somonic solutions | We Sustain

* = new in since 2015



Medical Technology

Cardiac Devices

Coramaze technologies | CryoTherapeutics | Middle Peak | NovaPump

Neuromodulation

CorTec | EBS Technologies | WISE

Orthopedics

McCuris* | Synoste

Emergency Care

Pentracor | ReActive Robotics | Seiratherm

Aesthetics

GME | Natural Dental Implants

Patient Monitoring

Capical | Dolosys | Humedics | Implantdata | Photonics Healthcare

Imaging & Navigation

Amedo | Eyesight&Vision | Fiagon | medineering | micro-dimensions | Scopis | SurgicEye | whitesonic

New Materials

Bubbles&Beyond | Heppe Medical | JeNaCell Medovent | multiBIND

Personal Health & e-Health

Adanova | Bomedus | connected-health | Desino | Exelonix | HRTBT | Newsenselab* | perora | PMS | Preventicus | Sonomed

Biotechnology

Small Molecules, Peptides & Proteins

AdvanceCOR | Algiax | Atriva* | AudioCure | Immunic | MYR | Omeicos | Zedira | HepaRegenix*

Immuno- and Gene Therapy

4 Animal Alsterscience | Amal Therapeutics | GeneQuine | Immunservice | Protectimmun | Rigontec | SciMab* | Tolerogenix*

In-vitro Dx

Abviris* | KSK-Diagnostics* | Lophius | onCGnostics | Predemtec | SeNostic*

R&D Tools, Biomarker Discovery, Biosensors

Ayoxxa | Biometrics | Chromotek | CuneSoft | cytena | PEPperPRINT | PreOmics* | Sierra Sensors | Venneos | Signatope*

Enzymes & Manufacturing

c-LEcta | Cysal | evoxx | Hapila | m2p-labs

Drug Delivery

Lipocalyx | Rodos | Sirion | Thermosome*

Green Biotech

Oaklabs | Subitec | Computomics*

Software | Media | Internet | E-commerce

Applications

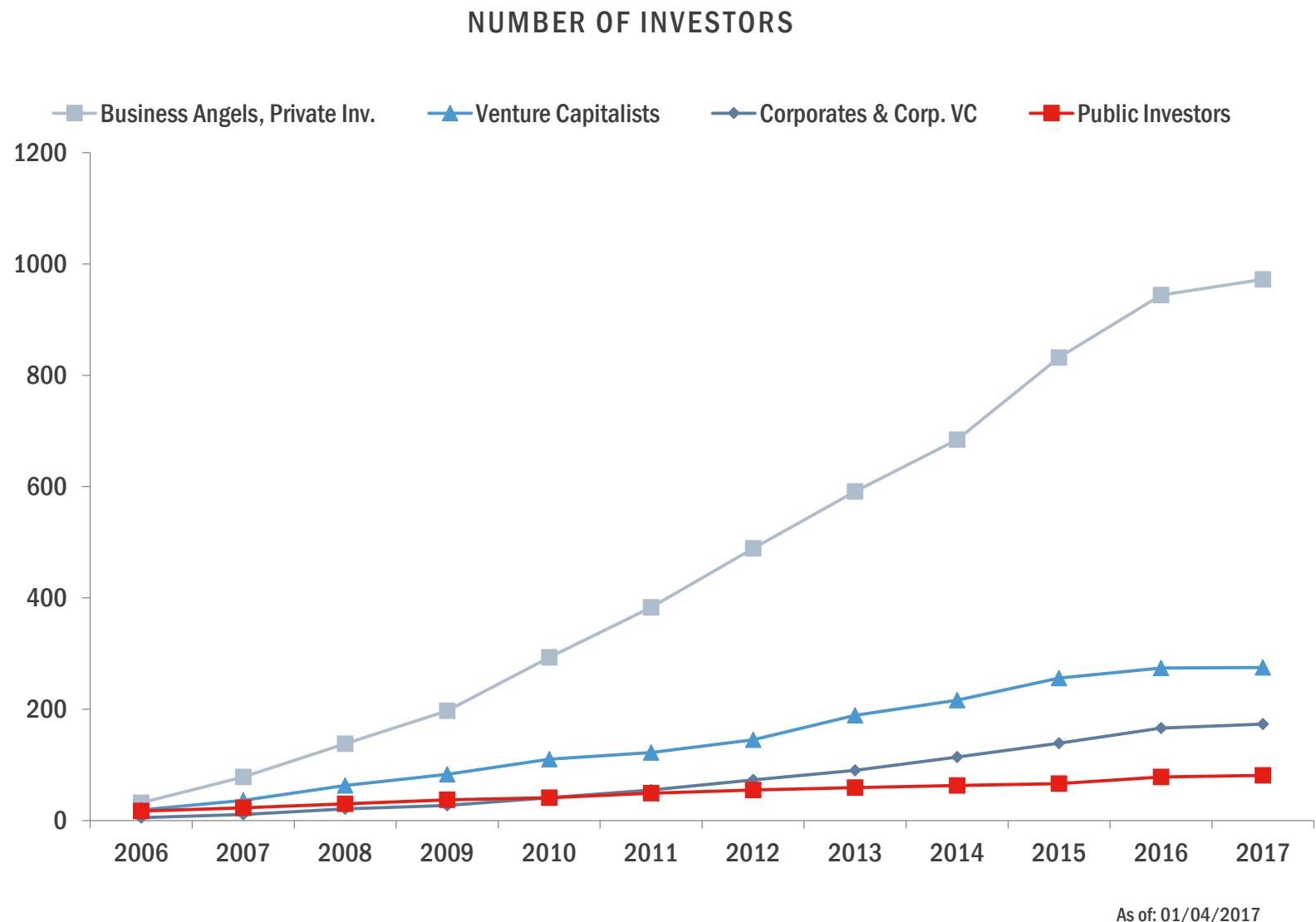
Human Resources	Marketplaces	Shops	Fintec	3D Printing	Publishing
Recruiting <i>Jobleads</i> MoBerries* <i>MobileJobs</i>	Support <i>Clickworker</i> Loopline * Maxment	99chairs * JUNIQE Makerist	Bettzeit * <i>Inventorum</i> *	Bitwala * FundFlow * <i>Figo</i> Payever * Mobilversichert *	ALL3DP
Mobile Interaction			Social <i>Altruja</i> FamPlus	Travel <i>Bookingkit</i> *	Grandcentrix <i>gravit</i> *
Asanayoga * FooBoo Opentabs <i>Skoove</i> * Yeti Learning * evalu *			StyleRemains Yorxs	Customer Alliance <i>eWings</i> * HQ Plus	Locr Pressmatrix Pylba

Tech / Infrastructure

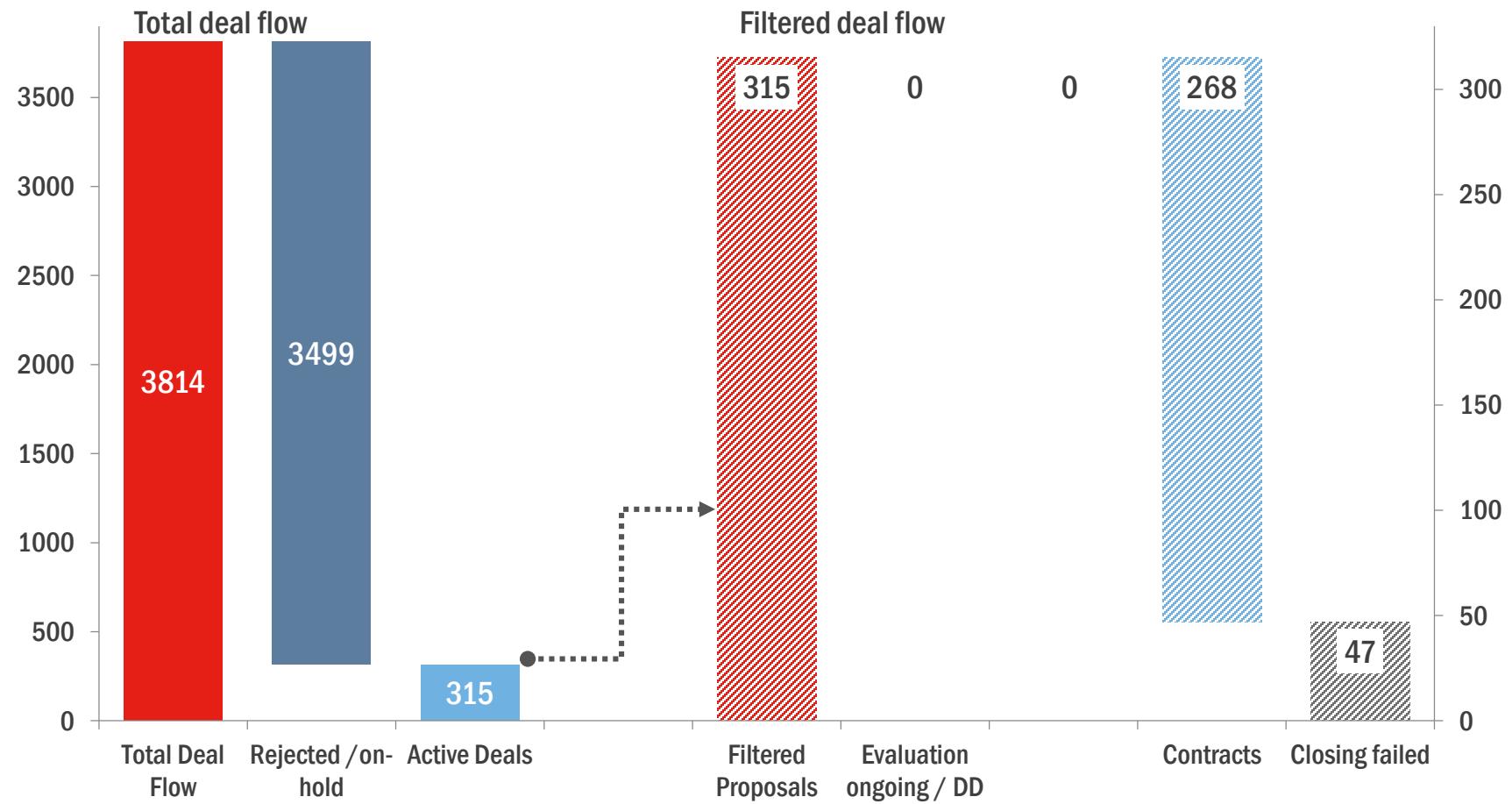
Search	UrgelO (Versus) SEMKNOX <i>*everybag</i> *
Marketing	Crossvertise Stocard Trackscale <i>uberMetrics</i>
AdTec	Simplaex <i>linkbird</i> Mbaas (Applanga, embraase) Semasio AdTriba
Communication	CommSolid ¹ <i>NFON</i> Smooke
Big Data	<i>AltusInsight</i> * ConWeaver Datavirtuality <i>enercast</i> Analytics metoda itembase minubo POSpulse Implisense wetransform *
IT-Infrastructure	cloudplan ¹ * Collinor eddyson Gridscale * <i>Quobyte</i> Sablonio T Dispatch <i>Tixel</i> tocario tracekey* WeSustain RAIDBOXES *
IT-Security	<i>baimos</i> Hornetsecurity <i>ondeso</i> Protected Networks SciEngines SSP Europe VMRay
Cloud	<i>Casavi</i> * Conceptboard Coredinate* <i>cubical</i> <i>EcoIntense</i> make.tv propertybase flowtify *
Tools	Codetrails coModule * Fruux Graylog Iplytics ParkTag pidoco <i>Skive</i> * Veodin <i>virtualQ</i> <i>Yatta</i> userlane Filestage * Incapptic * Connect *



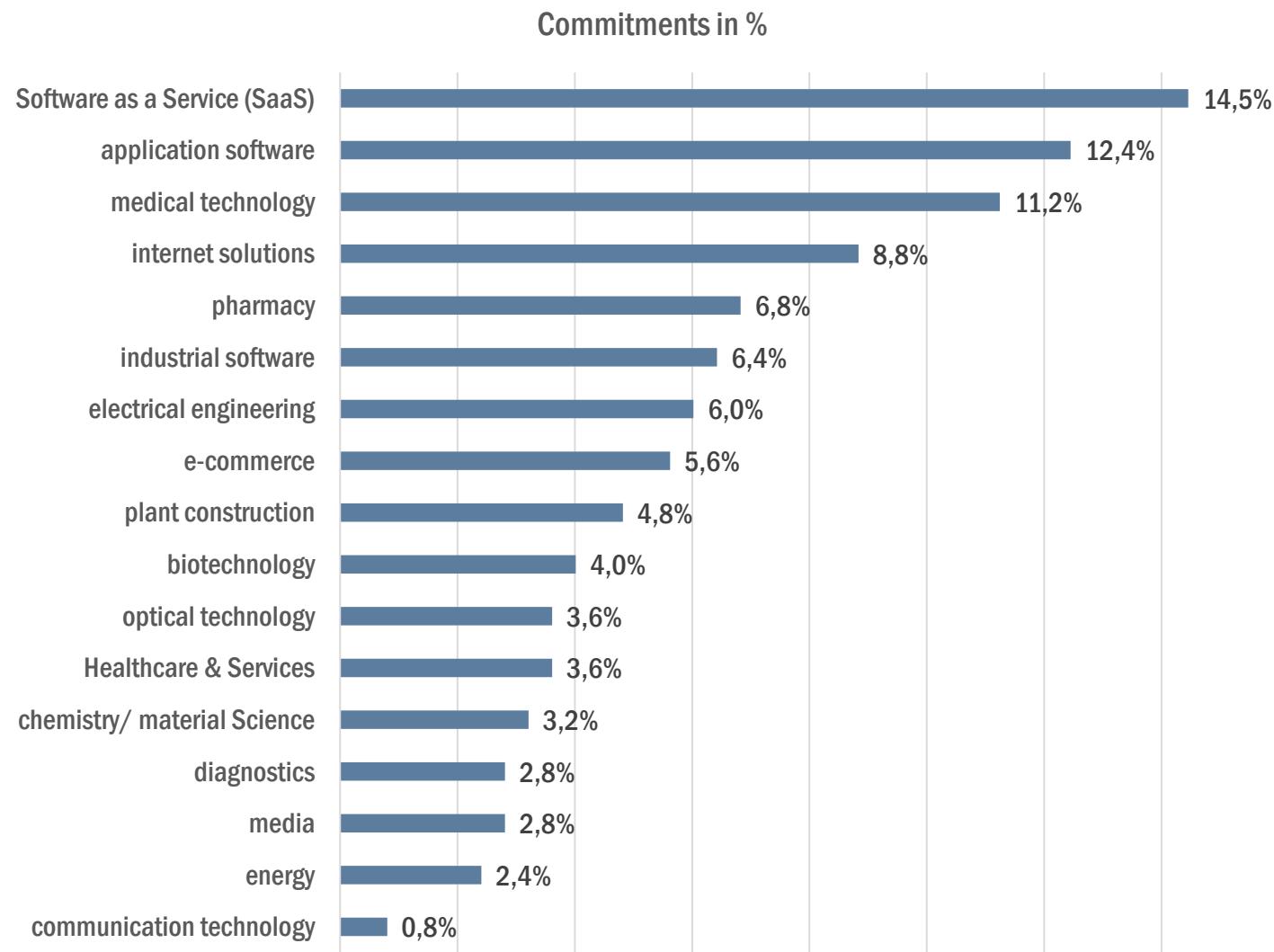
Over 1,000 stakeholders invested in HTGF portfolio



Deal flow



Commitments by technology field



As of: 01/04/2017

HTGF plans to launch €300 million Fund III in March 2017

Founding
2017

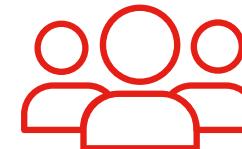
Planned target volume
€300 million



Investors

Public-private partnership, with 30% private share from target group:

- > 50% BMWi
- > 15% KFW
- > 30% large and medium-sized innovative firms



Operating time	6-year investment phase, 7-year divestment phase
Focus	Innovative high-tech firms in the seed stage (< 1-3 years old)
Investment type	Up to €3-5 million per company, comprising €0.2-1.0 million in the seed round
Value added	Hands-on operational support provided by experts and networks and strategic support from investment managers