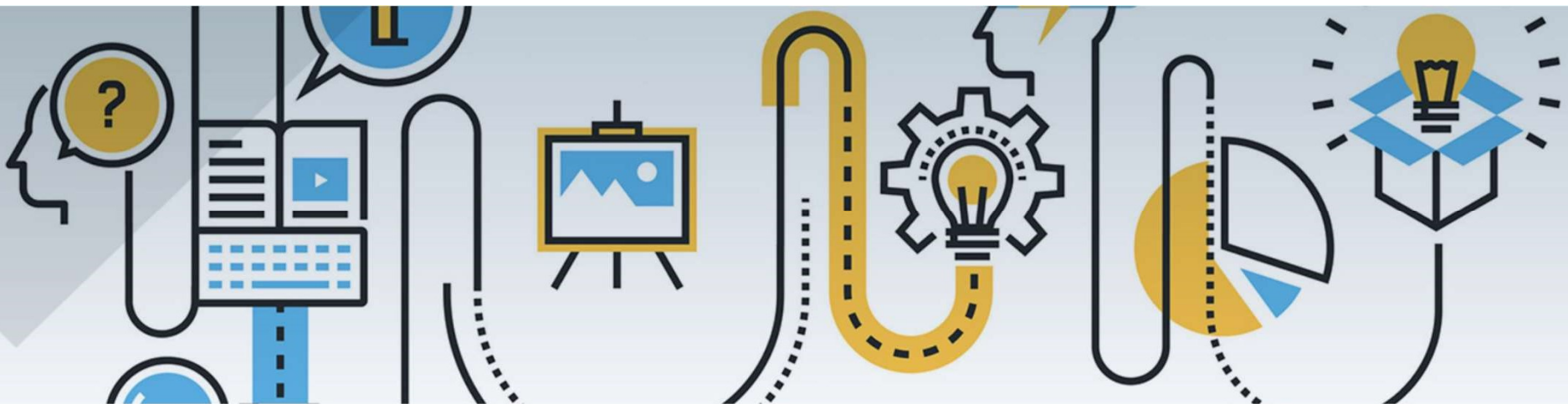


Ambiente, Salute e Sostenibilità

2° Convegno organizzato dal Laboratorio B+LabNet in occasione della Giornata Mondiale dell'Ambiente e del Festival dello Sviluppo Sostenibile 2019

Brescia, 5 giugno 2019

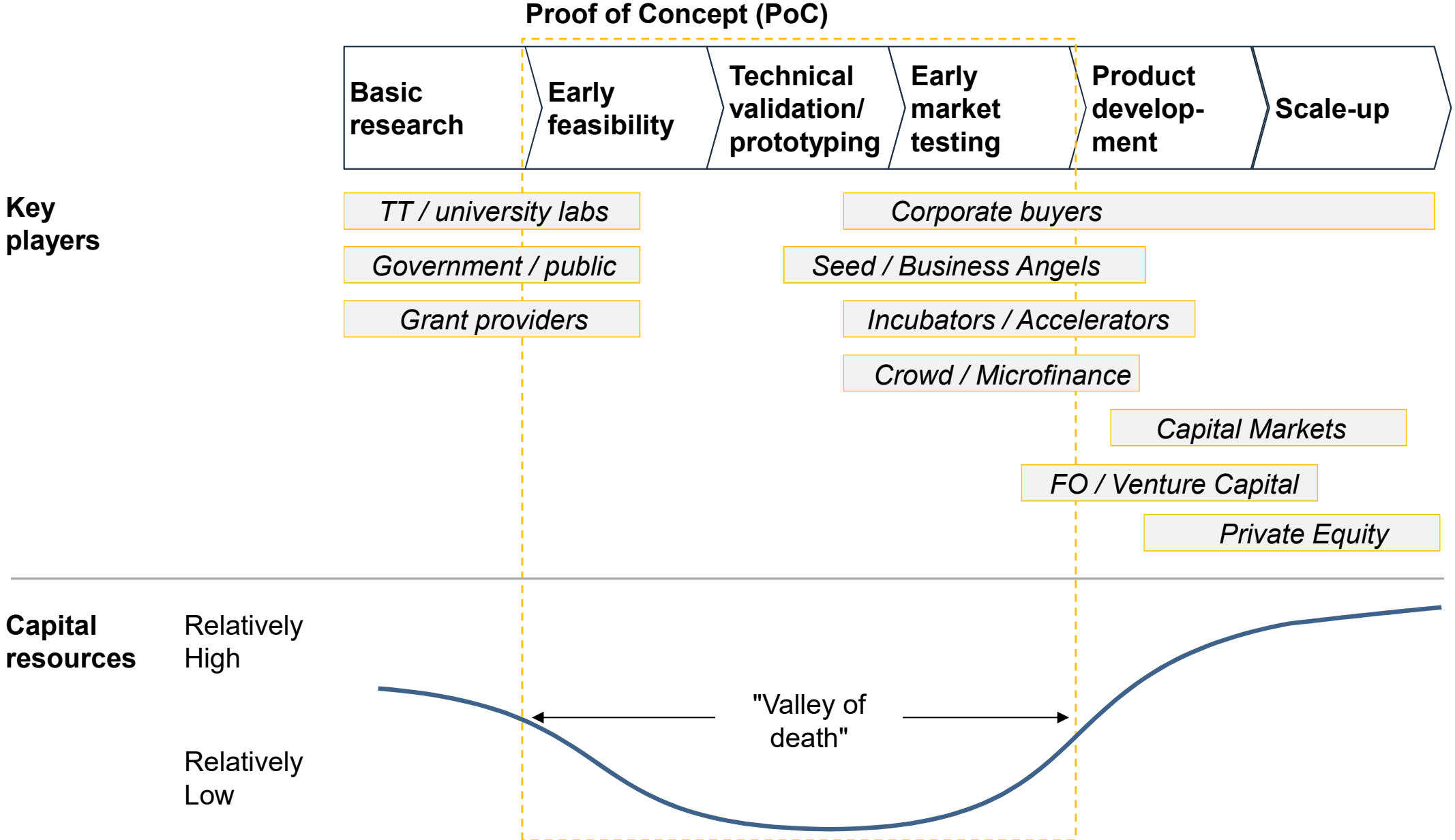


Il finanziamento dell'innovazione per la sostenibilità

PROGRESS TECH TRANSFER

THE ITALIAN TT FUND FOR SUSTAINABLE TECHNOLOGIES

THE MARKET OPPORTUNITY: SIGNIFICANT GAP IN FUNDING ACROSS THE EARLY STAGE DEVELOPMENT PHASE



WHY SUSTAINABILITY FOR A VC FUND

Large pool of opportunity

- Sustainable technologies is a large 'label' for a variety of opportunities
- **But... none of those gave birth to a unicorn in Europe: see [here](#)**

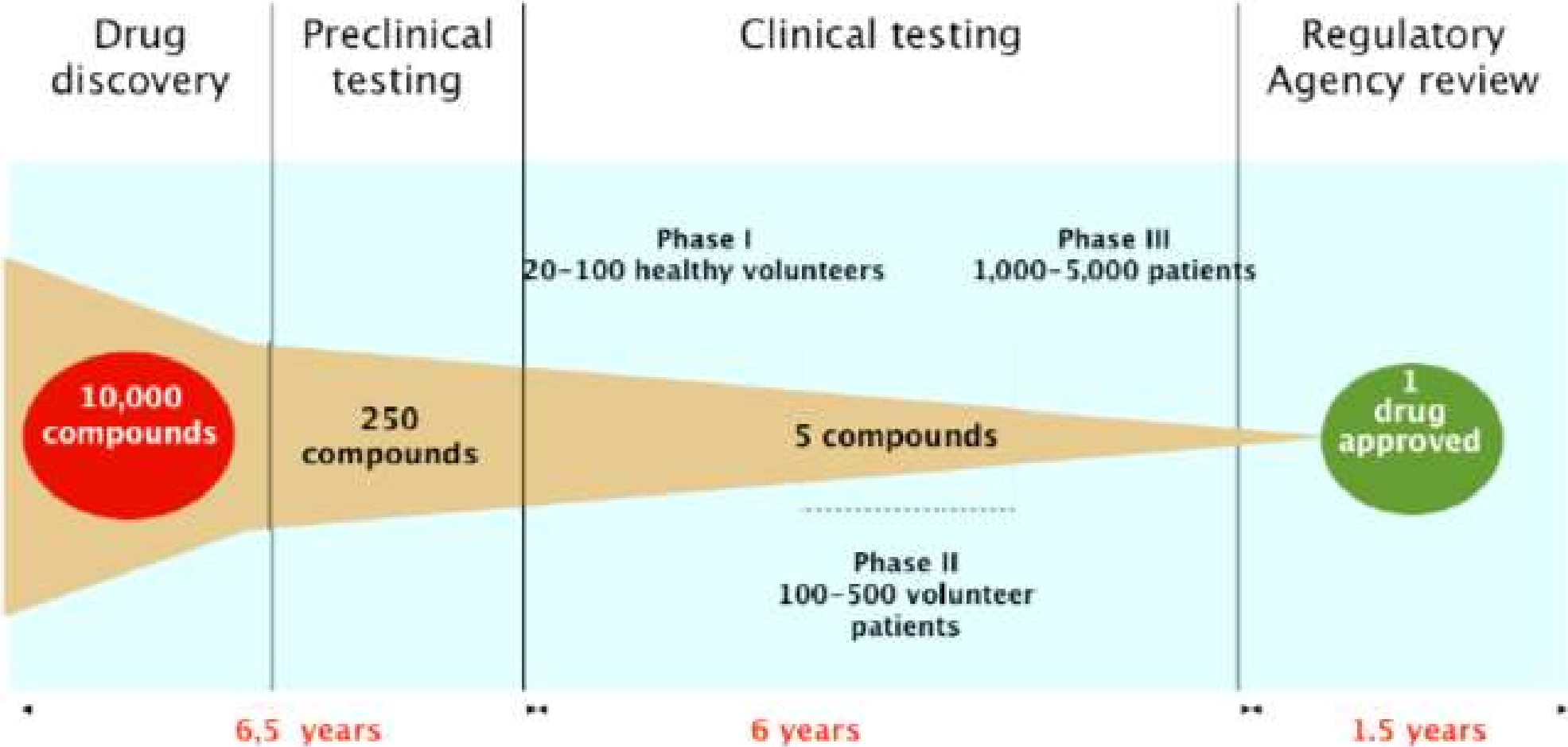
Lack of VC/seed in the field

- Not many early stage funds specialize in this area (although some at later stages are extremely successful: **see [Ambienta](#)**)
- This reinforces that case for market failure

Personal considerations

- Sometimes you become a father and you start seeing things differently

A PARADOX (COMPARED WITH OTHER INVESTMENT AREAS)



SUSTAINABILITY: A LARGE VALUE POOL

2012 – 2016

World



- Total economic value in 2016 of Sustainable Technologies (company turnover + capex investment + financial investments) estimated in excess of **3 USD trillion**
- Global growth rate: **3X vs. global GDP**

Europe



- Technologies for sustainability: **5X growth-rate** between 2005-2011 vs. regional GDP growth

Italy



- Italy at the **fourth place in European sustainability patents**

PROGRESS-TT: A UNIQUE PROPOSITION

Sustainability: a large value-pool

- Large, secular megatrend, which includes several technology verticals
- Italian academia producing high-quality research / technology in the field

Smart-PoC

- The only investment-focused initiative in Tech-Transfer for sustainability in Italy,...
- ...through Proof-of-Concept investment programs carried out with significant corporate engagement (leading industrial player involved early on)

Balanced, complementary team

- Management Team with complementary background and skills (tech, business, innovation management, venture capital, law, finance)

SUSTAINABILITY: A BROAD SET OF BUSINESSES IN 3 AREAS, SUBSTANTIALLY IMPACTED BY NEXT-GENERATION TECHNOLOGIES

	Areas	Example of technologies	Δ on total value 2015-2030 *
<p>Sustainability</p>	Energy <ul style="list-style-type: none"> • Energy efficiency • Energy storage • Energy transmission • Renewable energy 	<ul style="list-style-type: none"> • Smart metering & control systems • Artificial photosynthesis • Thermal storage / batteries • Carbon capture • Micro-grids, power management • WTE • ... 	~60%
	Water, other natural resources <ul style="list-style-type: none"> • Water, soil, air purification • Sustainable materials / chemicals • Recovery / recycling / waste management 	<ul style="list-style-type: none"> • Desalination • Bioremediation • Thermal depolymerizing • Bioplastics • Insulation / heat recovery • Green chemistry • Membranes / filters • Sensing / industrial process control • ... 	~25%
	Food / Agro <ul style="list-style-type: none"> • Organic crops/fertilizers • Urban agriculture • Micro-irrigation 	<ul style="list-style-type: none"> • Dosing pumps • Precision farming equipment • Controlling instruments • Sorting machinery technologies • High efficiency refrigerators • ... 	~15%

* Better Business, better world report 2017; AlphaBeta analysis

WHAT SUSTAINABILITY MEANS IN TERMS OF APPLICATIONS

- Air source heat pumps
- Anaerobic digestion
- Artificial photosynthesis
- Battery electric vehicle
- Bioconversion
- Biofuels
- Bioliquids
- Biological hydrogen production (algae)
- Biomass boilers in communal heating
- Bioplastics
- Biorefinery
- Bioremediation
- Biotic material
- Carbon capture
- Carbon-neutral fuel
- Circular economy
- Cogeneration
- Companion planting
- Composting
- Desalination
- Distributed generation
- Dosing pumps
- Eco-design
- Eco-innovation
- Electric car
- Energy efficiency
- Energy recycling
- Energy storage
- Energy technology
- Energy transmission
- Exhaust air heat pumps
- Fuel cells
- Gasification
- Geothermal heat pump
- Green chemistry
- Groundwater recharge
- Heat exchange systems
- High efficiency refrigerators
- Hydrogen storage
- Hydrogen vehicle
- Hydropower
- Heat recovery
- Life cycle management
- Low-carbon economy
- Low-flow taps and showers
- Low-flush toilets
- Low-volume baths
- Material technologies
- Micro-grids, power management
- Micro-irrigation
- Nano-wood
- Organic clothing
- Organic farming
- Osmotic power
- Photovoltaic panels
- Phytoremediation
- Plasma torch
- Power conversion electrical/electronic aspects for grid-connected applications
- PV systems with concentrators
- Rainwater harvesting
- Reclaimed water
- Recovery / recycling / waste management
- Reversed electro dialysis
- Road-powered electric vehicle
- Sensing / industrial process control
- Smart cities
- Smart metering & control systems
- Soil protection
- Solar thermal panels
- Superinsulation
- Sustainable agriculture
- Sustainable building
- Sustainable energy
- Sustainable materials / chemicals
- Sustainable product development
- Sustainable transportation
- Thermal depolymerizing
- Thermal storage
- Tower concentrators
- Underground hydrogen storage
- Urban agriculture
- Water power engine
- Water, soil, air purification
- Wave energy converter
- Wave power
- Wind farm
- Wind pump
- Wood economy
- WTE

THE FUND CHARACTERISTICS AT A GLANCE: A PIONEER PROPOSITION IN ITALY

Key Success Factors	<ul style="list-style-type: none">• High-quality selection of technologies at insourcing• Direct corporate engagement early on
Geographical scope	<ul style="list-style-type: none">• Italy only
Technological focus	<ul style="list-style-type: none">• Every technology possibly related to Sustainability, and complying with the Fund selection criteria (i.e.: Technology / Market readiness)
Investment stage	<ul style="list-style-type: none">• Proof-of-Concept and early stage start-ups (TRL 4 and higher)
Target funding	<ul style="list-style-type: none">• 40-50 € Million
Funding sources	<ul style="list-style-type: none">• Itatech through European Investment Fund & Cassa Depositi e Prestiti, and potentially other professional investors
Targeted returns	<ul style="list-style-type: none">• IRR >20%, >2X invested capital
Fund duration	<ul style="list-style-type: none">• Up to 13 years
Value generation model	<ul style="list-style-type: none">• Majority shareholders throughout the whole holding period; only considering dilution on exceptional basis, and only for follow-ons / other rounds• Upside value only from exit from PoC / start-ups invested-in
Management Team of the Advisory Co.	<ul style="list-style-type: none">• MITO-Technology: complementary background and skills (tech, business, innovation management, venture capital, law, finance)

THE INVESTMENT THESIS OF PROGRESS TECH TRANSFER

Technology focus

- Fast-growing, **scalable technologies addressing global issues in Sustainability** (“market pull, not technology push”)
- Assets / ideas that enjoy significant competitive barriers, **mainly protected through IP**
- Focus:
 - Priority on Energy and Natural resources
 - Opportunities to be found in Food / Agro



Selection criteria

- At the very early stage, we’ll **look primarily for great technologies rather than great entrepreneurs-inventors**
- Our decision-making will factor-in:
 - Quality of IP
 - Technology Readiness Levels (only TRL>4)
 - Market Readiness Levels
 - Market dynamics increasing chances to exit



Business Model focus

- Essentially **B2B**

WHAT PROGRESS TECH TRANSFER HAS AND OTHERS DO NOT

- Industrial vocation (more than just financial focus)
- Real PoC with no equity involvement (unless it becomes really necessary)
- Relational and long term perspective (up to 13 years): patient capital
- Money, but not just money: EIR programs and relationships
- Industrial engagement early on
- Continued selection of process through a dedicated PoC platform with periodic feedbacks