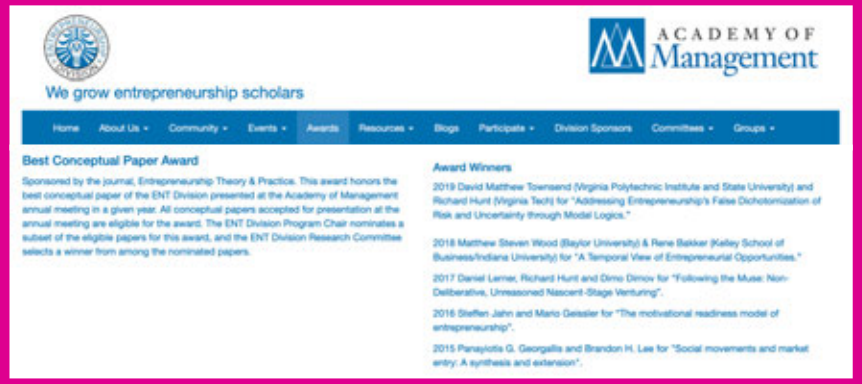


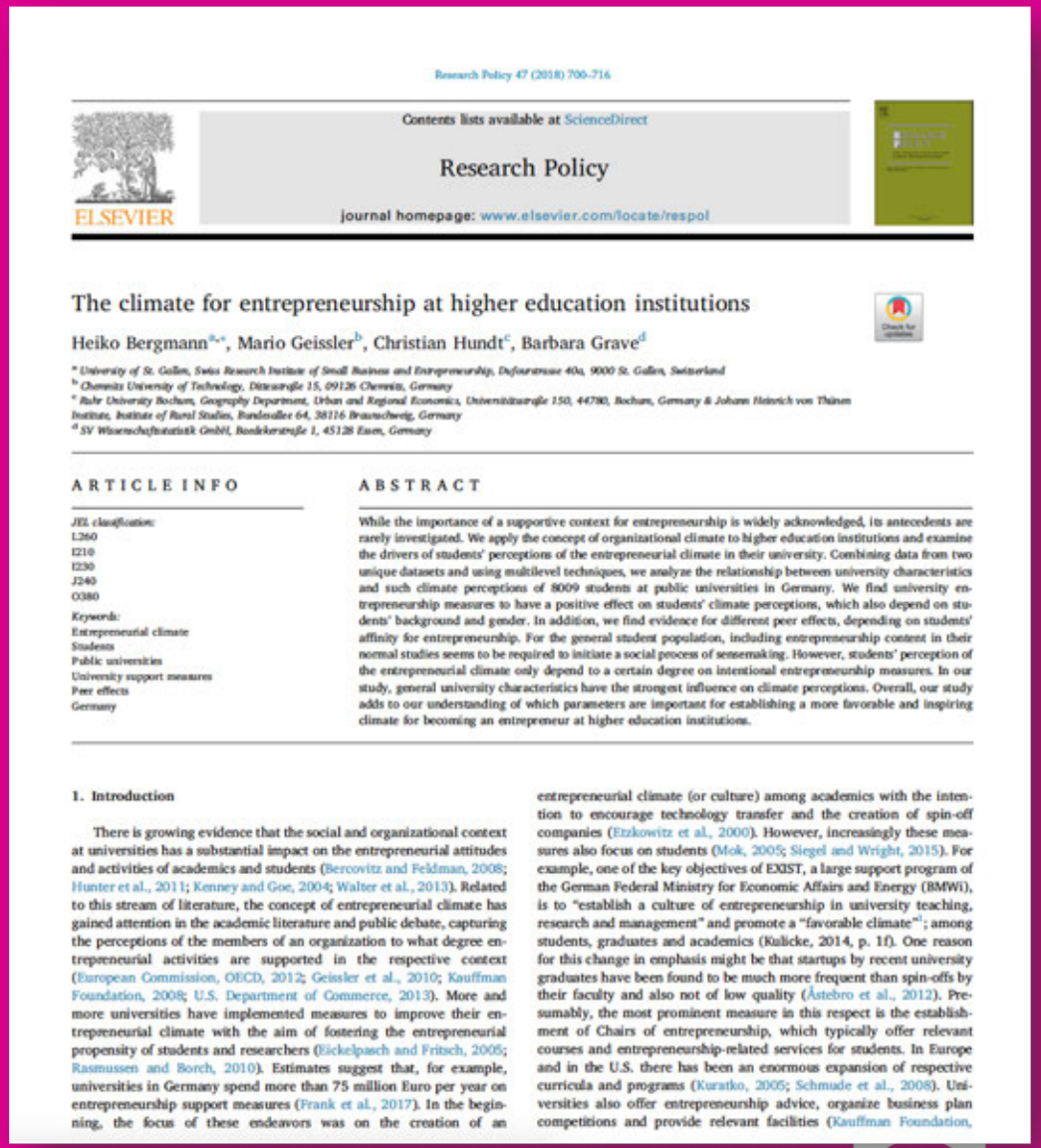
Shaping Entrepreneurial Ecosystems

Dr. Mario Geissler

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Research and Teaching

Inspiration and regional impact

- Promoting entrepreneurship and academic start-ups
- Analysis of regional start-up ecosystems
- Success factors in the foundation and succession process

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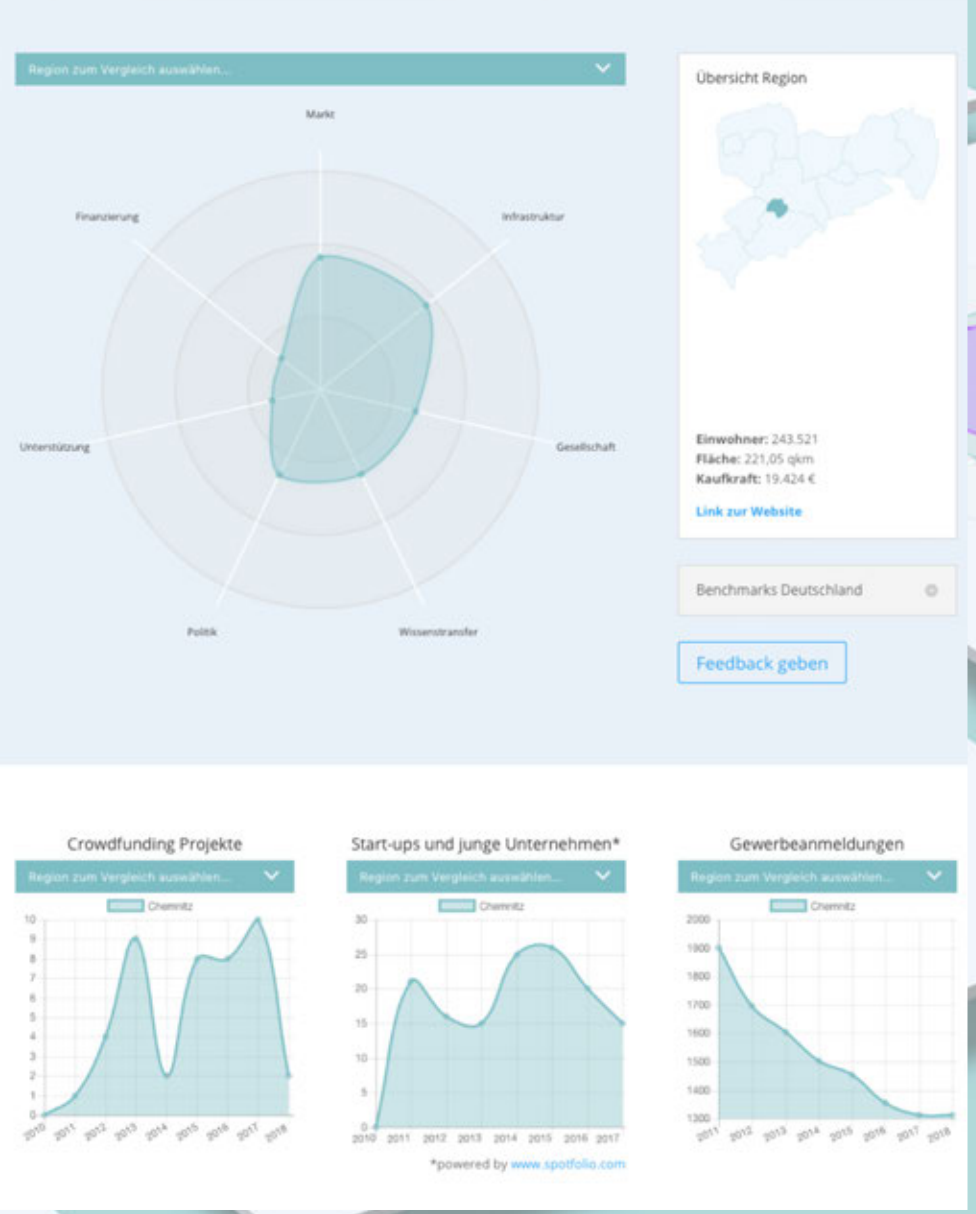
Startup Ökosystem Deutschland

Startseite Hintergrund Methodik Auswertung Städte Auswertung Landkreise

Die Studie "Start-up Ökosystem Deutschland" erfasst umfassend die Rahmenbedingungen für G

Verbesserungspotenziale besser erkannt und Handlungsempfehlungen entwickelt werden könn

Wie gründungsfreundlich ist Deutsch



Technology Transfer

www.q-hub.de



- Co-Founder and CEO of Q-HUB GmbH
- Regional innovation platform to connect start-ups and entrepreneurs with business angels, mentors and corporate partners
- Partner for established companies for business model innovation and digitization

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WHY
Entrepreneurs are important for economic development

- “Agents of creative destruction” – introduce change to the economic landscape by constantly undermining and challenging established industry incumbents (Schumpeter, 1934)
- Benefits: innovation (Acs and Audretsch, 1988), job creation (Blanchflower, 2000; Parker,2009), productivity level (van Praag, 2007), facilitation technology transfer and knowledge spill-overs from research to industry (Acs et al., 2009; Grimaldi et al., 2011)

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SYSTEMS
Entrepreneurs are important for economic development

"…a set of institutions whose interactions determine the innovative performance […] There is no presumption that the system was, on some sense, consciously designed, or even that the set of institutions evolved works together smoothly and coherently." (Rosenberg and Nelson 1994)

→ Systems constitute of multiple components that work together to produce system performance

→ Components can leverage and hamper each other

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ACTION
Entrepreneurs are important for economic development

- Entrepreneurial opportunities independent of the individual entrepreneurs do not matter
- Action by individuals are the starting point of the entrepreneurial process
- An individual has to form a conjecture that an opportunity exists and its pursuit is feasible and desirable

Ács et al. 2014; McMullen and Shepherd, 2006

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ENTREPRENEURIAL ECOSYTEMS
Bringing the pieces together.

- Research in entrepreneurial ecosystems draws on a heterodox literature that includes work on clusters, innovations systems, economic geography, social capital, and networks.
- Methodological and conceptual differences but one common belief:

  Regional attributes outside a firm contribute to the competitiveness of a new venture.

  Focus is on the entrepreneur and not the company!

Spigel, 2017

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ENTREPRENEURIAL ECOSYTEMS
The difference.

„entrepreneurs are more likely to share a core technology […] rather than a common client or market. […] **exchange knowledge about the challenges of growing an innovative venture** and the presence of many entrepreneurs in a region helps build up a **support structure such as networks of investors, advisors, and mentors**. […] advantages […] are related to resources specific to the entrepreneurship process such as startup culture and financing rather than other types of industrial benefits found in clusters that accrue to firms of all sizes and ages."

Spigel, 2017, p. 52

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ENTREPRENEURIAL ECOSYTEMS
Bringing the pieces together.

Combinations of social, political, economic, and cultural elements within a region that support the development and growth of innovative startups and encourage nascent entrepreneurs and other actors to take the risks of starting, funding, and otherwise assisting high-risk ventures.

Ács et al. 2014; McMullen and Shepherd, 2006

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ENTREPRENEURIAL ECOSYTEMS
Key components

- presence of entrepreneurs
- workers
- investors
- mentors
- favorable government policies
- research universities and other sources of innovative knowledge
- availability of local customers
- entrepreneurial culture that encourages risk taking

Spigel, 2017

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ENTREPRENEURIAL ECOSYTEMS
Bringing the pieces together

Three main regional resources that contribute to increased entrepreneurship and growth:

1. **Culture:** fosters cooperation and knowledge sharing (e.g., Gertler, 2003), or acts as barriers to this kind of activity (Saxenian, 1994; Staber, 2007).
2. **Social networks**: knowledge spillovers (e.g. firms and universities, Owen-Smith and Powell, 2004), spread information about entrepreneurial opportunities (Arenius & de Clercq, 2005), connect entrepreneurs with financiers (Powell et al. 2002)
3. **Policies and universities**: support culture and networks by removing institutional barriers to entrepreneurs, training skilled workers and entrepreneurs, funding support programs (e.g. networking events or incubators, Feldman and Francis, 2004)

Spigel, 2017

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ENTREPRENEURIAL ECOSYTEMS
Cultural attributes

- Underlying beliefs and outlooks about entrepreneurship within a region.
- Two main aspects: cultural attitudes and histories of entrepreneurship.
- Influences entrepreneurial activities “by shaping acceptable entrepreneurial practices and norms.” (Aoyama 2009, p. 500)
- Different cultural attitudes toward entrepreneurship and risk taking can lead to radically divergent economic and entrepreneurial paths (Saxenian 1994)
- Cultural beliefs normalize outlooks, e.g. standard career path vs. only when no other options are available (Kibler et al., 2014).
- Prominent histories of entrepreneurial success stories are an important part of these cultural outlooks (Feldman et al., 2005).

Spigel, 2017

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ENTREPRENEURIAL ECOSYTEMS
Social attributes

- Resources composed of or acquired through the social networks within a region, e.g. information about entrepreneurial opportunity, access to financing, first customers, suppliers
- Networks tend to be locally focused with the densest links forged by frequent face-to-face interactions; important: network inside and outside the region
- Financing: venture capitalists and business angels
- Mentors (experienced individuals) and dealmakers (high social capital, build new connections)

Spigel, 2017

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ENTREPRENEURIAL ECOSYTEMS
Material attributes

- Attributes with a tangible presence in the region
- Universities: new technologies, skilled workforce, entrepreneurial mindset among members
- Support services and facilities: provide specialized assistance for early-stage firms; incubators, accelerators, coworking facilities
- Entrepreneurial policies: support programs, rules, regulations
- Local markets: customer feedback, proof of concept

Spigel, 2017

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What aspect / attribute is most important for an entrepreneurial ecosystem?

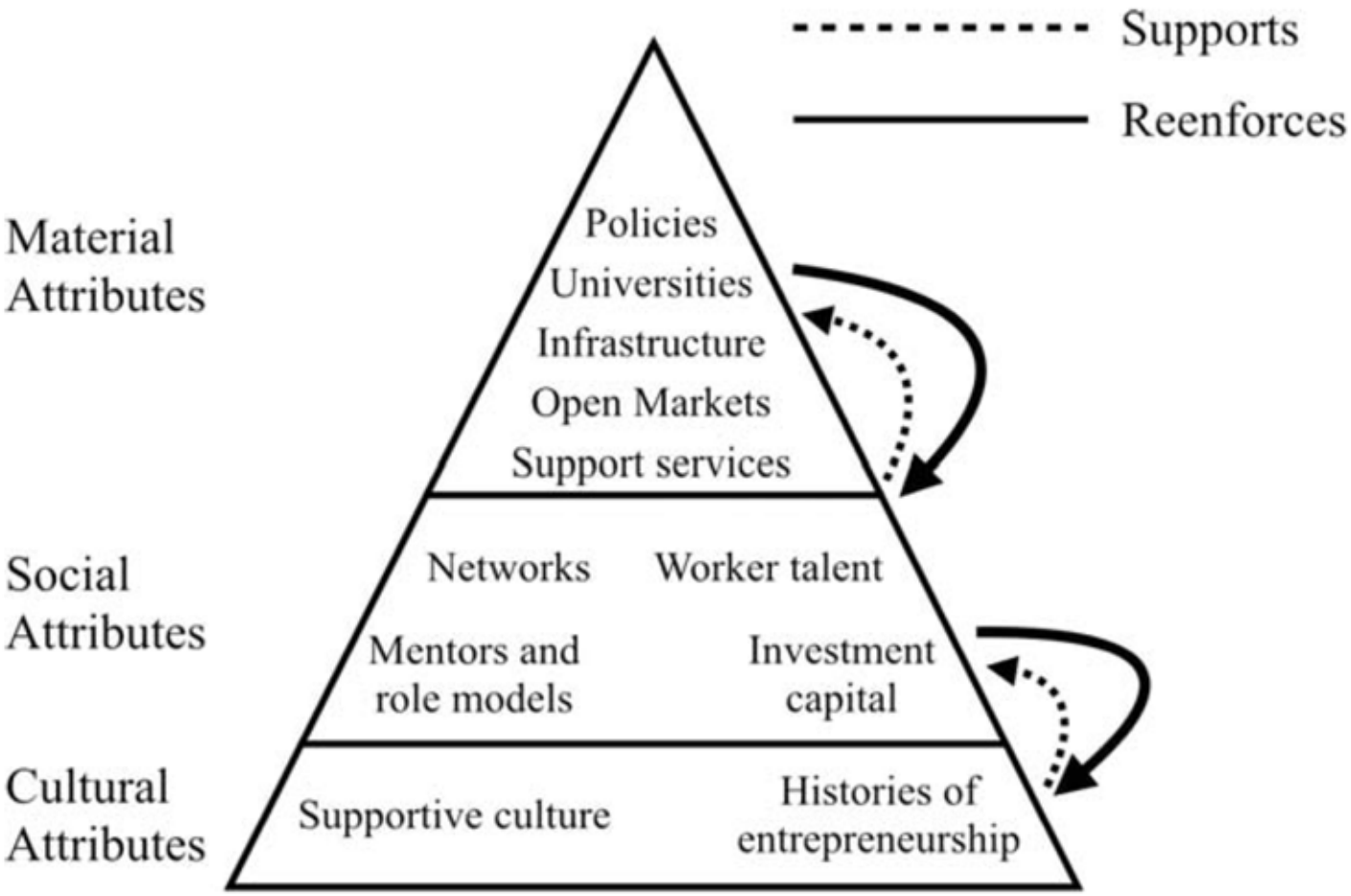
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„Culture eats strategy for breakfast.“

Peter Drucker

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ENTREPRENEURIAL ECOSYTEMS
Attributes and Relationships



Spigel, 2017

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SYSTEMS
Components interact to produce system performance

- Different attributes and factors are not independent.
- Rather, they form a system with many interdependencies.

Ács et al. 2014

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How can we increase the performance of the system?

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SYSTEMS
Bottlenecks hold back the development of the ecosystem.

- Performance of dynamic systems characterized by interdependencies and feedback loops depends on the element that has the **lowest value in the system structure**. Development or growth depends on alleviating the binding institutional barriers (North, 1990).
- **Theory of constraints:** improvement by strengthening the weakest link – the bottleneck – that constrains the performance of the entire system (Goldratt, 1994; Tol and Yohe, 2006; Yohe and Tol, 2001).
- **Theory of the weakest link:** elements of the system are only partially substitutable with one another (Harrison and Hirshleifer, 1989).

→ Search for and eliminate bottlenecks

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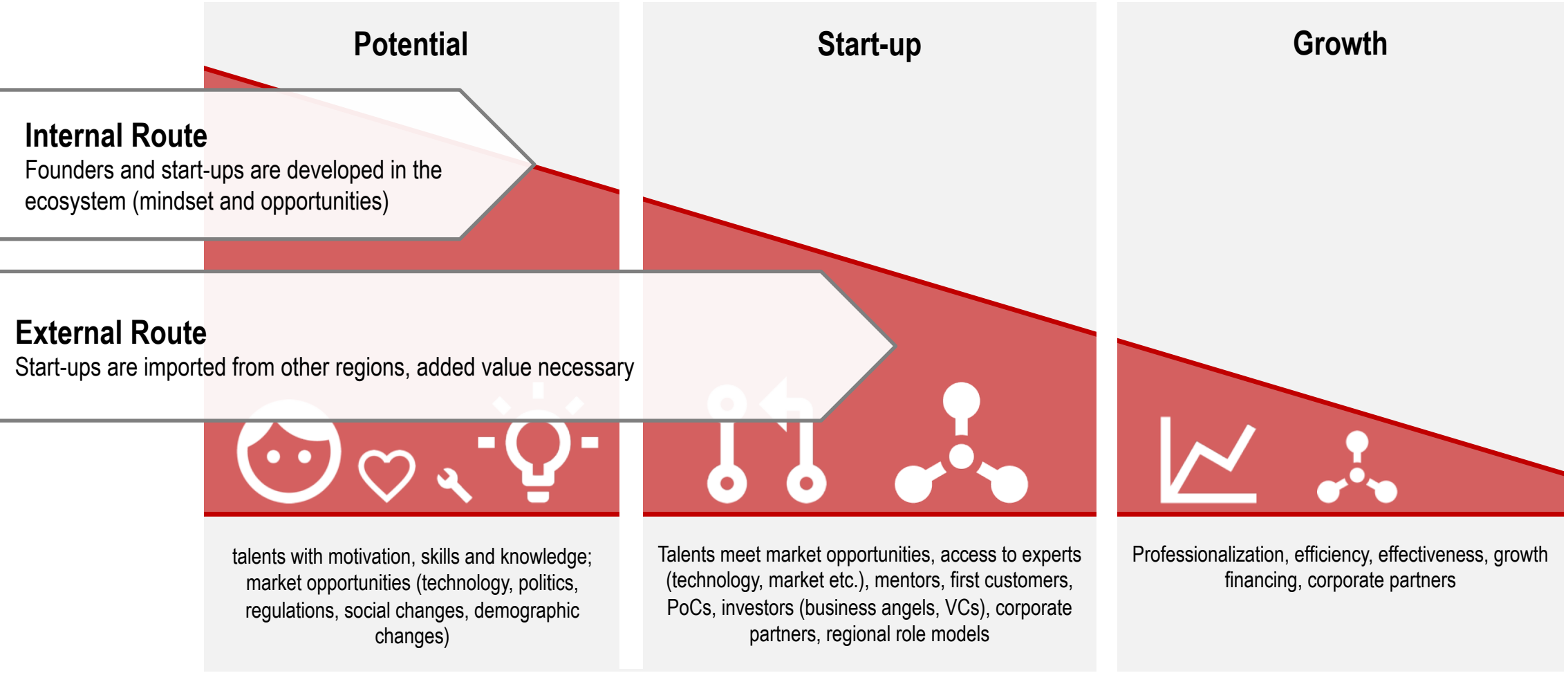
SYSTEMS
Components interact to produce system performance

- The penalty for bottlenecks should be larger if there are greater differences between single components.
- Stable and efficient configurations are those that are balanced — i.e., that all components are at the same level.
- A loss in one component cannot be fully compensated by a corresponding increase in another system component.

Ács et al., 2014

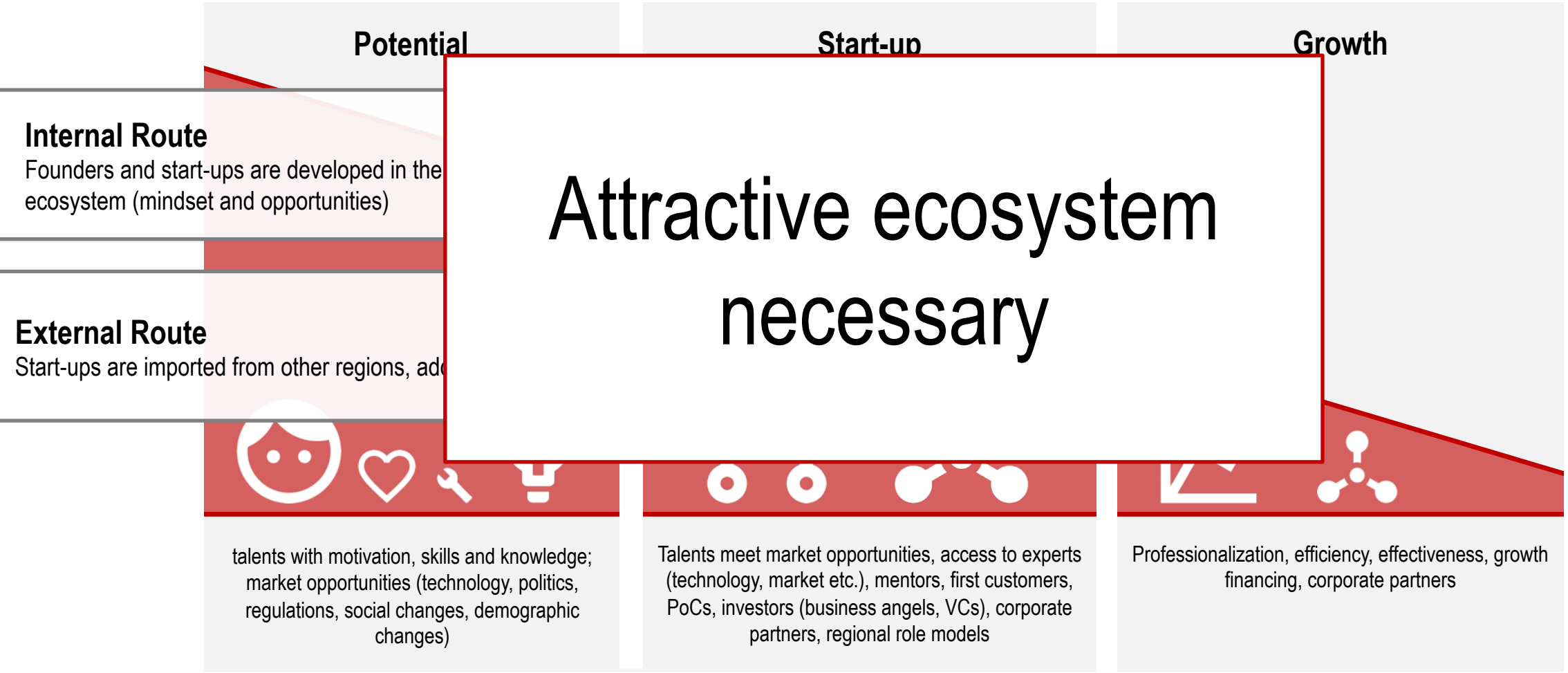
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The Start-up Process



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The Start-up Process



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Paralign

Digital Health Berlin 2016 – San Francisco
Your daily companion to track your feelings and thoughts. It's free and it's anonymous! It offers meditations, articles and inspirational quotes personalized to your specific situation and topic to help you reach your goal. Paralign's intelligent algorithms match people based on their past experiences to provide advice on how to get out of a dip or to create a better life. You're instantly connected to a community of like-minded people that are identified by our AI algorithm.

Traction late 2016: 15.000 users, 60.000 conversations, 8-10 min. average time

Focus: growth and product

Startups from Spain, Finland, US, Germany, Greece, UK, Israel, Italy, Poland; Partners: Arvato Bertelsmann, Deutsche Apotheker- und Ärztebank, Munich Health, Philips, Sanofi

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SYSTEMS
Components interact to produce system performance

- Components that are important for entrepreneurs

  (financing, culture, mentors, technology, workforce etc.)

- Further factors: e.g. ambitions of the team, strategic vision of the place and

  an open culture might turn weaknesses into strength (for example:

  Chemnitz high population of elderly → age tech)

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Role of the City / Region

- Vision and strategy
- Open-mindedness
- Infrastructure
- Regulator
- Lawyer for start-ups and match-maker
- Customer and investor (also in people, e.g. software engineers)
- Own innovation culture (e.g. digital inhabitant service, Open Innovation, Open Data, City Hackathons)
- Host (support of incubators and accelerators)

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Thank you

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