

Innovation management and quest for a more strategic society

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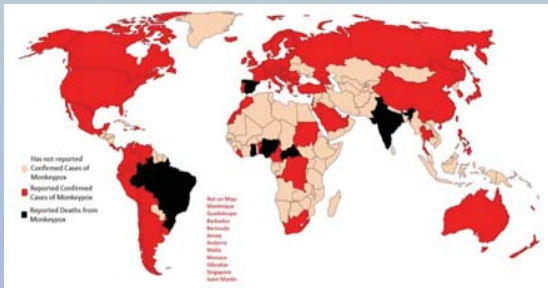
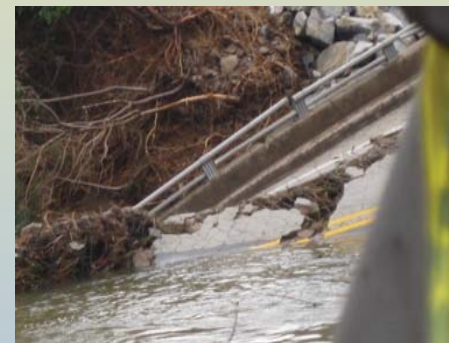
PICMET '22 Conference

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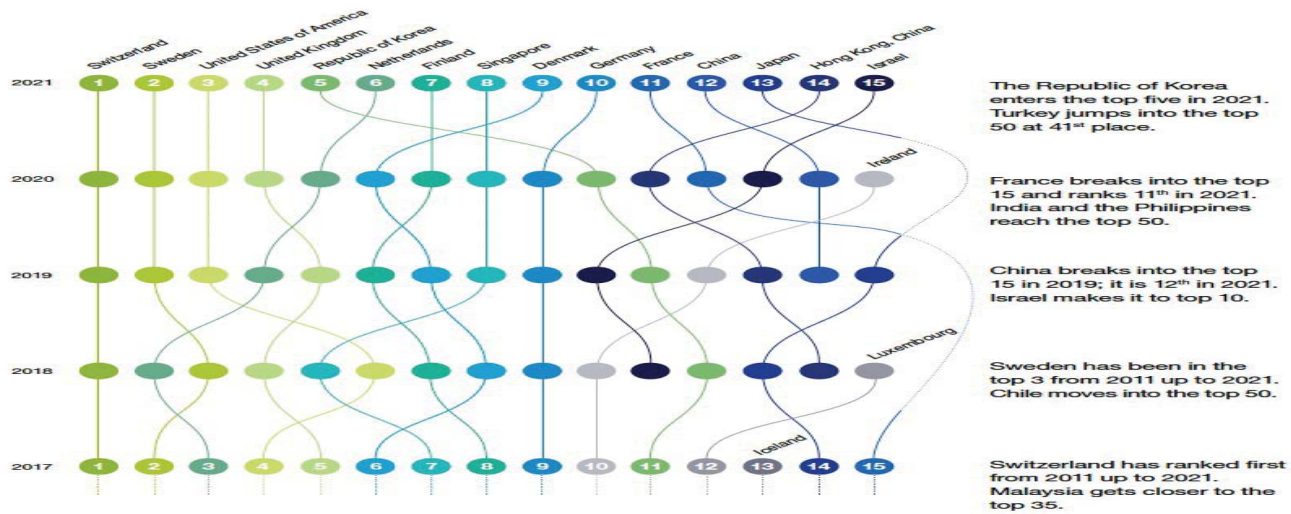
“So why aren't we smart?”



Sources: Ukraine Min. of Defense- [https://commons.wikimedia.org/wiki/File:Anti-terrorist operation in eastern Ukraine \(War Ukraine\) \(26920250611\).jpg](https://commons.wikimedia.org/wiki/File:Anti-terrorist_operation_in_eastern_Ukraine_(War_Ukraine)_26920250611.jpg);
Nat Ukraine Police- [https://commons.wikimedia.org/wiki/File:War in Luhansk Oblast \(2022-07-02\) 03.jpg](https://commons.wikimedia.org/wiki/File:War_in_Luhansk_Oblast_(2022-07-02)_03.jpg); Francis Vallance- [https://commons.wikimedia.org/wiki/File:Port Hills fire, day three - 32152180923.jpg](https://commons.wikimedia.org/wiki/File:Port_Hills_fire_day_three_-_32152180923.jpg);
Trocaire- [https://commons.wikimedia.org/wiki/File:Kibera Slum Railway Tracks Nairobi Kenya July 2012.jpg](https://commons.wikimedia.org/wiki/File:Kibera_Slum_Railway_Tracks_Nairobi_Kenya_July_2012.jpg); PNA- [https://commons.wikimedia.org/wiki/File:Floodwater continues to rise along Lagarian Creek.jpg](https://commons.wikimedia.org/wiki/File:Floodwater_continues_to_rise_along_Lagarian_Creek.jpg);
Ruhrfisch- [https://commons.wikimedia.org/wiki/File:Pennsylvania 973 Bridge 3.jpg](https://commons.wikimedia.org/wiki/File:Pennsylvania_973_Bridge_3.jpg); [https://commons.wikimedia.org/wiki/File:The United States Delivers COVID-19 Vaccine Doses to Lesotho \(51697819732\).jpg](https://commons.wikimedia.org/wiki/File:The_United_States_Delivers_COVID-19_Vaccine_Doses_to_Lesotho_(51697819732).jpg) ;
[https://commons.wikimedia.org/wiki/File:Map of Monkeypox Outbreak 2022 as of 6th August.jpg](https://commons.wikimedia.org/wiki/File:Map_of_Monkeypox_Outbreak_2022_as_of_6th_August.jpg); [https://commons.wikimedia.org/wiki/File:20151030 Syrians and Iraq refugees arrive at Skala Sykamias Lesvos Greece 2.jpg](https://commons.wikimedia.org/wiki/File:20151030_Syrians_and_Iraq_refugees_arrive_at_Skala_Sykamias_Lesvos_Greece_2.jpg);
Andreas Weith-[https://commons.wikimedia.org/wiki/File:Endangered arctic - starving polar bear.jpg](https://commons.wikimedia.org/wiki/File:Endangered_arctic_-_starving_polar_bear.jpg);

Difficult to break into top tier: Usual suspects

Figure 8
Movement in the GII top 15, 2017–2021



Source: Global Innovation Index Database, WIPO, 2021.

Note: Year-on-year comparisons of the GII ranks are influenced by changes in the GII model and data availability.

Saga of Seattle



Sources: US Nat. Archives & Records Adm- [https://commons.wikimedia.org/wiki/File:Proposed_United_States_SST_\(Boeing_2707\).jpg](https://commons.wikimedia.org/wiki/File:Proposed_United_States_SST_(Boeing_2707).jpg);

Bill Abbot- https://commons.wikimedia.org/wiki/File:Boeing_2707_mock-up.jpg; <https://www.historylink.org/file/1287>;

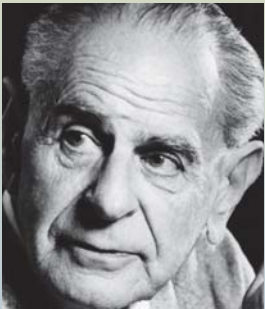
Jiaquan Airplane Fan- https://commons.wikimedia.org/wiki/File:Building_92_of_Microsoft_Redmond_Campus_-_panoramio.jpg; Biodin- https://commons.wikimedia.org/wiki/File:Seattle_Spheres_on_May_10,_2018.jpg;

Coolcaesar- <https://commons.wikimedia.org/wiki/File:Starbuckscenter.jpg>; Ron Claisen- https://commons.wikimedia.org/wiki/File:Seattle_Space_Needle_at_night_2009.jpg

Can societies be “smart?”

Illustrative Attempts to *conceptualize modern societies*

“Open” Society



Source: LSE Lib.- https://commons.wikimedia.org/wiki/File:Karl_Popper.jpg

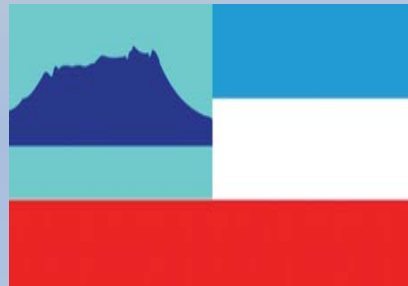
“Smart” Society

(articulated by various firms, e.g., IBM, Huawei, etc.)

“Entrepreneurial” Society

“Start-up nation”

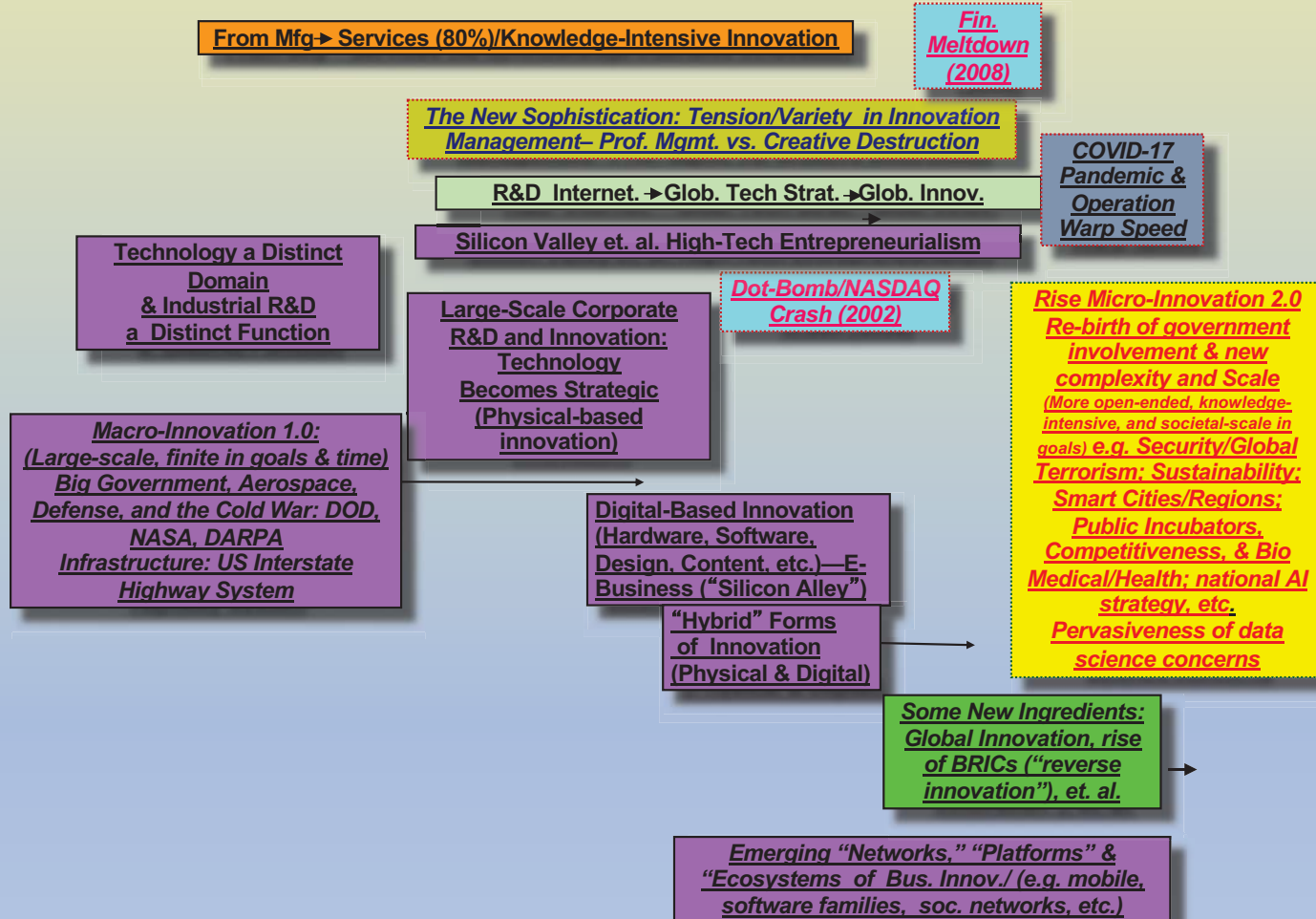
“Innovative” Society



Other sources: Reshaig Bayramli-https://commons.wikimedia.org/wiki/File:Flag_Azerbaijan.jpg; https://commons.wikimedia.org/wiki/File:Bandera_de_Omán.png; https://commons.wikimedia.org/wiki/File:Flag_of_Sabah.png; [https://commons.wikimedia.org/wiki/File:Flag_of_Israel_\(3-2\).svg](https://commons.wikimedia.org/wiki/File:Flag_of_Israel_(3-2).svg)

Leveraging the increasing variety, and complexity of modern innovation

1950s 1960s 1970s 1980s 1990s 2000 9/11/01 2010s 2020s 2030s



Quest for a more *strategic society*

Includes:

**Possessing innovative capabilities and entrepreneurship—
*Capacity for improvement and at times renewal***

However, please note that while possessing innovative capabilities is essential, it is also a component among a complex set of interrelated and society-wide competencies

Possessing innovative capabilities and entrepreneurship: *Capacity for improvement and at times renewal*

**Deploying managed Innovation,
e.g. corporate innovation strategy, R&D,
technology projects and initiatives, etc.**

**Developing and applying advanced
professionalism and digital technologies:
including data science, AI, machine learning,
advanced project management, etc.**

**Manifesting spirited
entrepreneurialism**

**Designing and implementing large-scale, multi-sector
technology programs (i.e. macro-innovation 2.0), e.g. OWS,
national AI strategy, smart city initiatives, modern infrastructure, etc.**

Integrating the requisite parts of this modern innovation ecosystem

Current general state of affairs:

Reactive and fragmented

Infrastructure as a case in point

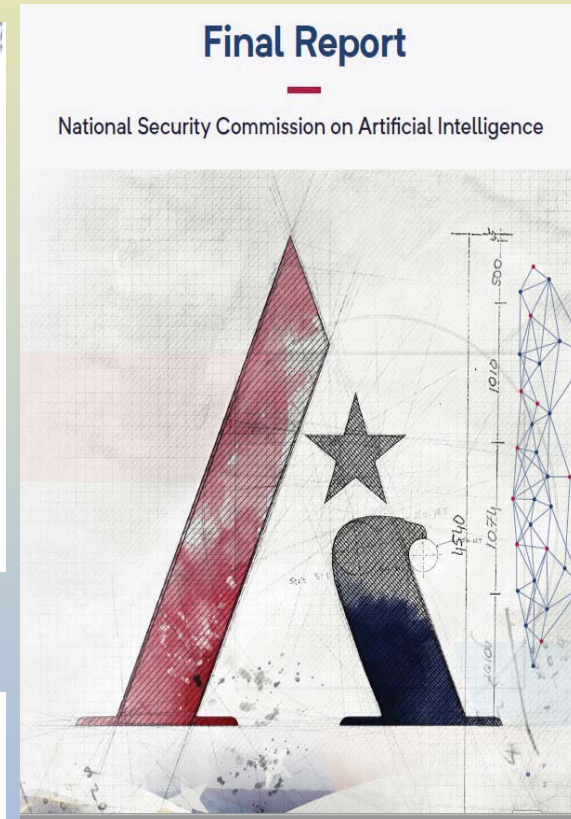
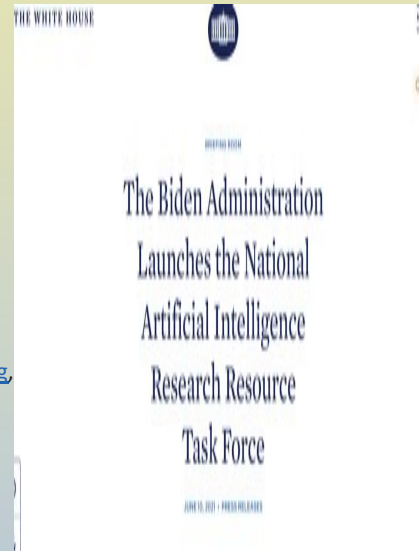
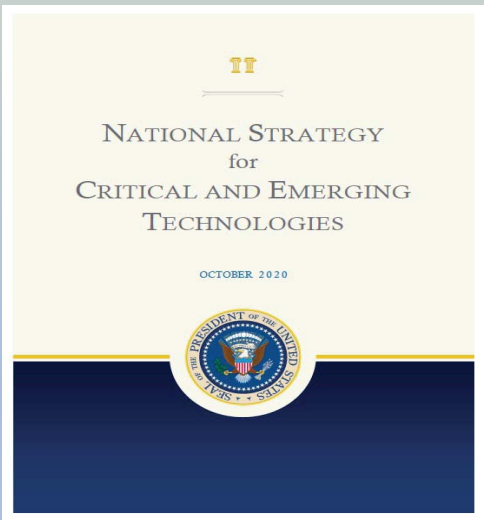


Sources: <https://www.npr.org/2021/11/15/1055841358/biden-signs-1t-bipartisan-infrastructure-bill-into-law>; FEMA Photo Lib.- https://commons.wikimedia.org/wiki/File:FEMA_-_40126_-_Crack_in_a_roadway_in_Washington.jpg; Pacific HW Electrical Lines- [https://commons.wikimedia.org/wiki/File:Pacific_Highway_Electrical_Lines,_Portland,_Oregon_\(23670415099\).jpg](https://commons.wikimedia.org/wiki/File:Pacific_Highway_Electrical_Lines,_Portland,_Oregon_(23670415099).jpg); Energy.Gov- [https://commons.wikimedia.org/wiki/File:Solar_carport_\(9078555412\).jpg](https://commons.wikimedia.org/wiki/File:Solar_carport_(9078555412).jpg); Bill Hathorn- https://commons.wikimedia.org/wiki/File:American_Airlines_station,_NYC_IMG_3591.JPG; TomasEE- https://commons.wikimedia.org/wiki/File:Roadwork_-_panoramio.jpg

US “national AI strategy” efforts as a case in point



Source: TUBS- [https://commons.wikimedia.org/wiki/File:Usa_edcp_\(%2BH1_%2BAK\)_relief_location_map.svg](https://commons.wikimedia.org/wiki/File:Usa_edcp_(%2BH1_%2BAK)_relief_location_map.svg), accessed 1/22/2022



Question: Does data science/AI constitute a twenty-first century “space race?”

Entrepreneurial spirit and “creativity“ in “Yabacon Valley,” Yaba, Lagos, Nigeria as a case in point



Source: JRC (ECHO, EC)-https://commons.wikimedia.org/wiki/File:Nigeria_Base_Map.png



Sources: https://commons.wikimedia.org/wiki/File:2013_Yaba_Lagos_Nigeria_12998105744.jpg ;
 Omoeko Media- https://commons.wikimedia.org/wiki/File:Ojuelegba_bridge,_Yaba,_Lagos-Nigeria.jpg



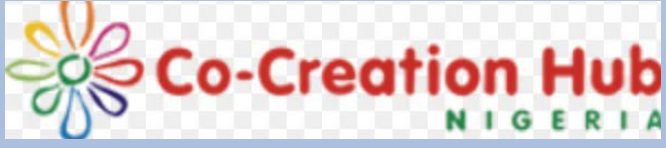
Source: [https://commons.wikimedia.org/wiki/File:University_of_Lagos_\(Unilag\).jpg](https://commons.wikimedia.org/wiki/File:University_of_Lagos_(Unilag).jpg);



Source: <https://unilag.edu.ng>



Source: <https://en.wikipedia.org/wiki/Konga.com>



Source: https://en.wikipedia.org/wiki/Co-Creation_Hub#/media/File:CcHUB_logo.png



Source: <https://guardian.ng/technology/yaba-was-always-right/>

Applying science connection on a continental scale: AI for all of Africa as a case in point



WHAT WILL AI MEAN FOR AFRICA?

In Africa, AI can help with some of the region's most pervasive problems: from reducing poverty and improving education, to delivering healthcare and eradicating diseases, addressing sustainability challenges — and from meeting the growing demand for food from fast-growing population to advancing inclusion in societies.⁶ AI democratizes access to innovative and productivity-boosting technology to fuel the growth the continent needs.

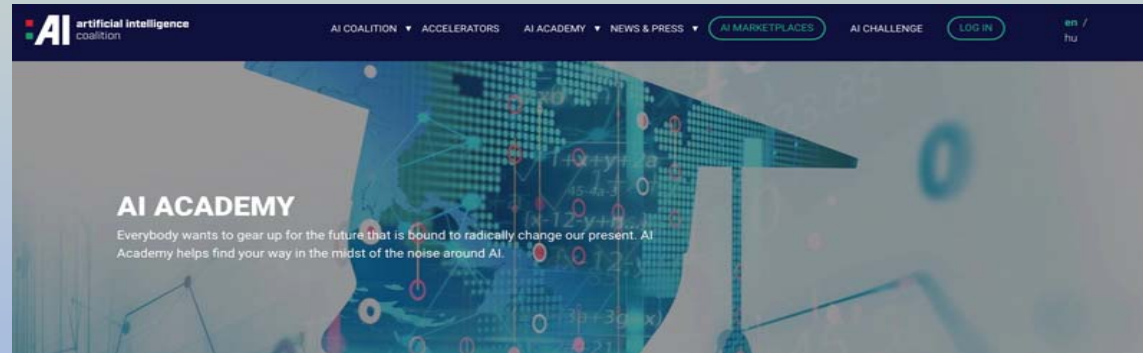
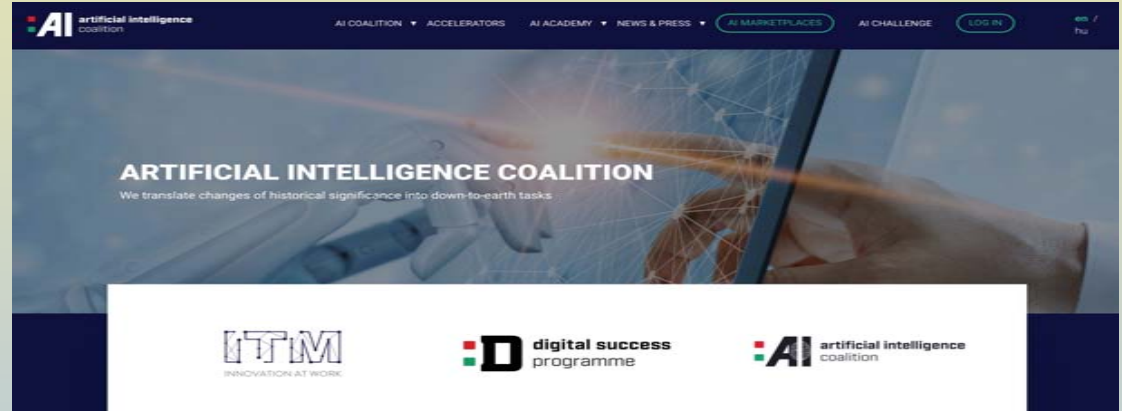
Health	Transportation	Education	Public services	Food production	Disabilities
AI offers vast opportunities to transform how we understand disease and improve health.	AI can provide safe and efficient transportation; expand the capacity of existing road infrastructure and improve traffic flow. It can also reduce carbon emissions and facilitate greater inclusiveness.	AI can develop predictive models for engagement and comprehension. It can be used to develop new approaches to education that may revolutionise how people learn.	AI can improve how governments interact with their citizens and deliver services. It can create efficiencies, reduce burdens, and eliminate redundancies.	AI offers significant opportunities to increase food production by improving agricultural yield and reducing waste.	AI can help address some of the problems faced by the more than 80 million people in Africa.



Source:
US Government (CIA)-[https://commons.wikimedia.org/wiki/File:Political_Map_of_Africa_\(2021\).svg](https://commons.wikimedia.org/wiki/File:Political_Map_of_Africa_(2021).svg)

Source: *Artificial Intelligence for Africa: An Opportunity for Growth, Development, and Democratization*, Access Partnership-University of Pretoria, Working Paper, 3/27/17

Entrepreneurialism, innovation incubators, and entrepreneurial startups in Hungary as case in point



Source: https://commons.wikimedia.org/wiki/File:Hungary-geographic_map-es.svg



Source: https://commons.wikimedia.org/wiki/File:Ustream_logo.svg

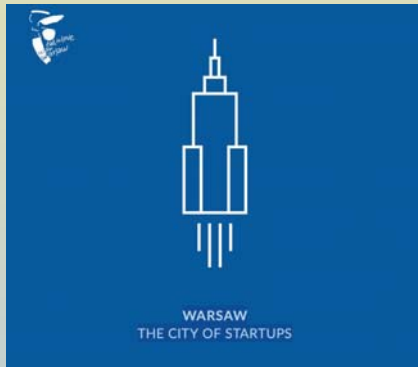
(Note: Founded in 2007, on Jan. 21, 2016 Ustream was acquired by IBM for approximately \$130 Million)



Source: https://commons.wikimedia.org/wiki/File:LogMeIn_logo.svg

Sources: <https://ai-hungary.com/en/content/ai-coalition>; <https://ai-hungary.com/en/content/ai-academy>

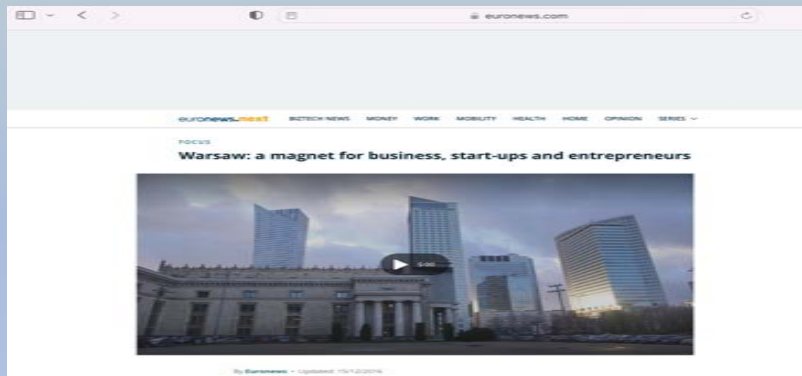
Entrepreneurialism, innovation incubators, and entrepreneurial startups in Poland as case in point



Source: https://commons.wikimedia.org/wiki/File:Poland_Base_Map.png



Source: Adrian Grycuk-https://commons.wikimedia.org/wiki/File:Google_for_Startups_Warsaw_sign_2019.jpg

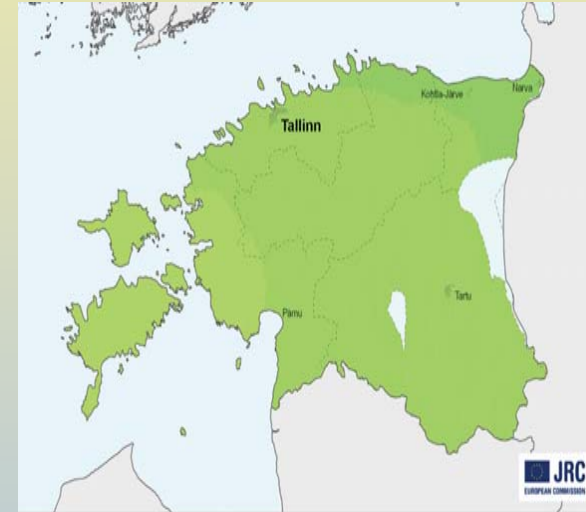


Source: <https://www.euronews.com/next/2016/12/15/warsaw-a-magnet-for-business-start-ups-and-entrepreneurs>



Source: Adrian Grycuk-https://commons.wikimedia.org/wiki/File:Dawny_magazyn_spirytusu_Google_for_Startups_Campus_2019.jpg

Some positive counter-examples?



Sources: JRC, EC https://commons.wikimedia.org/wiki/File:Finland_Base_map.png; CIA World Factbook-[https://commons.wikimedia.org/wiki/File:CIA_World_Factbook_map_of_Singapore_\(English\).png](https://commons.wikimedia.org/wiki/File:CIA_World_Factbook_map_of_Singapore_(English).png); JRC https://commons.wikimedia.org/wiki/File:Pvgis_solar_horiz_EE.png; JRC, EC-https://commons.wikimedia.org/wiki/File:Switzerland_Base_Map.png

**Revising public policy views of “grand strategy” to reflect at societal level
multifaceted evolution of management thinking and practice and similar sophisticated blending**

**Innovation and entrepreneurship:
e.g., Schumpeter, Solow, etc.**

**Professionalism and analysis: e.g.,
Sloan, Chandler, Porter, etc.**

**General management-Leadership, and
human judgment: e.g., Drucker,
Andrews, Barnard, etc.**

**Wider perspective: Serving all of
society: e.g., Prahalad, etc.**

**Leverage modern technology, including
digitization, data science, AI, etc.**

FinEst Twins initiative as a case in point

and

Eindhoven region a case in point

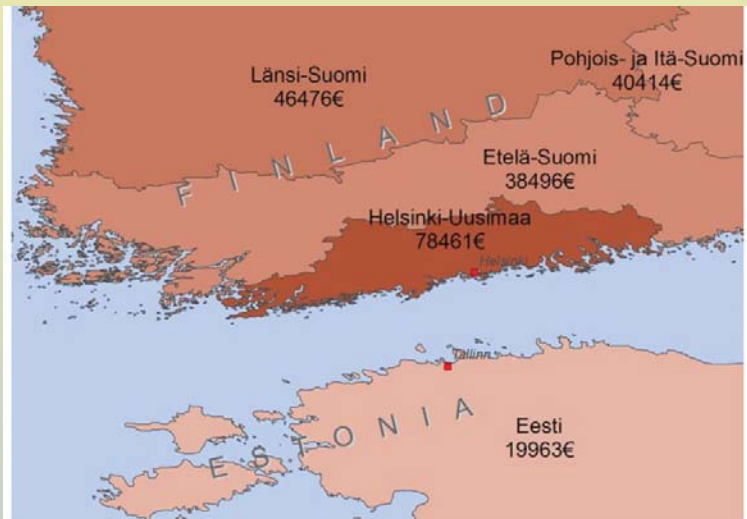


Figure 3. GDP per inhabitant, 2013 (source: Eurostat)

Source: Ralf-Martin Soe, *FINEST Twins: platform for cross-border smart city solutions* dg.o '17, June 07-09, 2017, Staten Island, NY, ACM ISBN 978-1-4503-5317-5/17/06, <http://dx.doi.org/10.1145/3085228.3085287>, p.2

3 The Brainport Region As Triple Helix

3.1 The Brainport Region

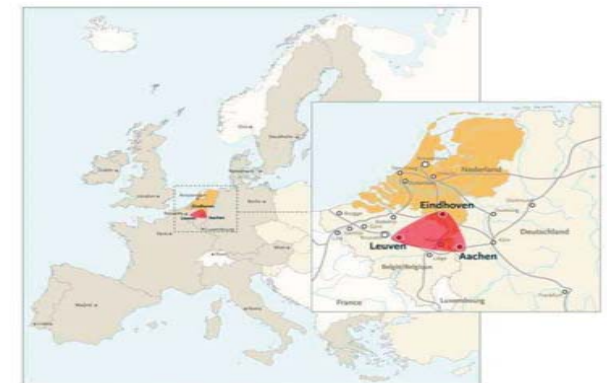


Figure 1: Location of the Brainport region (source: www.brainport.nl)

Source: Joep Brouwers, Hein van Duivenboden, and Marcel Thaens, *The Triple Helix Triangle: Stimulating ICT-driven Innovation at Regional Level*, Paper prepared for the 2009 Annual Conference of EGPA Malta, September 2009, 29 July 2009 version, p. 9

Quest for a more *strategic society*

Possessing innovative capabilities and entrepreneurship:

Capacity for improvement and at times renewal

Possessing innovative capabilities is essential; but is also a component among a complex set of interrelated and society-wide competencies

Reflecting a moral dimension
and engendering broad-based trust

Maintaining capacity to learn and
maintain accumulated knowledge

Leadership and strategic direction:
Need to avoid lethargy and directionless:

Requisite openness and variety;
but how open and how diverse a society?

Providing short-term and longer-term solutions

Manifesting integrative and
holistic perspectives and capacities

Right of citizens to belong a society that is strategic seeking, which, on the basis of trust, among other things, commits to tackling longer-term challenges (including applying digital technologies and innovation) and to nurturing talent that can flourish