

## OPINION

Debatt

Innovationer

# ”This is Sweden's most serious and invisible challenge”

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Örjan Strandberg. Foto: Jörgen Appelgren

## DEBATE.

**Many groundbreaking innovations come from inventors outside the academic world. Government and industry now need to take immediate action to preserve Sweden's corps of problem-solvers - they are an absolute societal necessity, Örjan Strandberg writes.**

Sweden has two imminent challenges, and a third invisible – still perhaps the most serious.

- The acute one of course being the ongoing Corona pandemic.
- The second is the increasingly obvious, inevitable climate change threatening life on earth.
- The third - invisible - is society's declining capacity and competence for solving society's challenges (including the two mentioned above).

The development of cutting-edge technology has slowly but surely decelerated over the past 30 years, with the exception of commercially attractive and fastmoving digitized Internet-based products and services. But online and digital products can not replace fossil fuels, eliminate greenhouse gases or the release of methane gas caused by thawing permafrost.

If one is to learn from history, one would be wise to study what has previously alleviated, reduced and eliminated human crises, hardships and challenges.

The individuals below are just a few of those who for centuries have provided humanity with groundbreaking solutions in construction, health, technology, chemistry, medicine, transportation, communication and more.

Elis Lindén, Alfred Nobel, Herbert Kroemer, John Bardeen, Walter H. Brattain, William B. Shockley, Sten Engwall, Gaston Planté, Waldemar Jungner, Edmond Becquerel, James Blyth, John V Atanasoff, Clifford E Berry, Jack Kilby, Robert Noyce, India 4th century, Edmund Cartwright, Semitian 1500 BC, Ray Tomlinson, ARPA, Östen Mäkitalo, Louis-Jacques-Mandé Daguerre, Johannes Gutenberg, Guglielmo Marconi, John Robinson Pierce, Alexander Graham Bell, Vladimir Kosma Zworykin, Tim Berners-Lee, Nicolas Appert, Ninni Kronberg, Clarence Birdseye, John Deere, John Gorrie, Baltzar von Platen & Carl Munters, William Hadaway, John Bennet Lawes, John Froehlich, Owens Corning Corp, Egyptian or Fenician 2500 BC, Wallace Carothers, J.E.T. Woods & J. Clark, China 10th century, Alec Jeffreys, Hans & Zacharias Jansen, René-Théophile-Hyacinthe Laënnec, Galileo Galilei, Wilhelm Conrad Röntgen, Gregory Pincus, John Rock, Min Chueh Chang, Åke Senning, Hanaoka Seishū, Sven Erik Sjöstrand, Ivan Östholm, Howard Walter Florey, Ernst Chain & Norman Heatley, Louis Pasteur, Rune Elmqvist, Carl Gunnar Engström, Edward Jenner, Thomas Saint, Thomas Savery, Wilbur & Orville Wright, François Isaac de Rivaz, Richard Trevithick.

It is these individuals listed above who have invented:

The construction crane, dynamite, the semiconductor, the transistor, geothermal heating, the first rechargeable battery, the nickel-cadmium battery, the solar cell, the wind turbine, the computer, the integrated circuit, the spinning wheel, the loom, the alphabet, electronic mail (e-mail), the Internet, mobile telephony; NMT & GSM, photography, the printing press, radio transmission, the communication satellite, the telephone, television, the World Wide Web, canned food, dry milk, frozen food, the steel plow, the refrigerator, the refrigerator without moving parts, the electric stove, the first artificial fertilizer, the tractor, fiber glass, glass, nylon, stainless steel, the DNA fingerprint, the magnetic compass, the microscope, the stethoscope, the thermometer, X-ray, the birth control pill, the heart-lung machine, the first anesthetic, Losec, penicillin, pasteurization, the pacemaker, the respiratory protective, vaccination, the sewing machine, the steam engine, the airplane, car with internal combustion engine, the steam engine.

Most of these individuals are neither researchers nor scientists. In fact, even medical innovations and inventions have academic institutions as their origin in less than 50 percent.

Nevertheless, since the late 1970s, Sweden has gradually phased out its main corps of problem solvers - the innovators and inventors - from the society build.

Swedish governments have passively let the internationally respected organization, the Swedish Inventors' Association, collapse. That in turn has reduced the Swedish corps of organized inventors and innovators to less than 700 individuals today.

Instead, the state has annually allocated just over 1.7 billion Euros to universities and colleges, in the groundless hope that these institutions will deliver the technical, medical, communicative and industrial solutions that ensure and develop the welfare of society.

This despite that both international patent statistics and history proves that it is the inventive individuals (including those listed above) who are the ones behind the greatest achievements of civilization and thus humanity's foremost providers of welfare.

Unlike politicians, artists, journalists and other extrovert professions, the creative problem-solving personality is often not very outspoken. They're not very skilled at promoting themselves. Their driving



force is instead their exceptional problem-solving talent, in far too many cases, even without a claim for compensation.

A society that gradually loses the awareness that innovations mainly originate from this particular category, will soon see the consequences in reduced welfare, declining industrial development and thus the increase in unresolved problems. Sweden is already there today.

After 10 years, representing inventors, innovators and their issues in media, in meetings, negotiations and conferences, this will be my last appeal to industrial representatives and political decision-makers regardless of party to, before it is too late, now finally secure Sweden's innovation power and welfare development.

The government could do this by - as with their research funding - allocating financial resources to the essential corps of developers and idea bearers, who cannot receive compensation for their development work until their efforts have resulted in marketed and sold products.

A budgeted prospect for securing Swedish innovation and regrowth is available.

Political representatives only need to communicate their interest in it, thereby also acknowledging their responsibility for the serious situation.

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outgoing chairman of the Stockholm Innovators Association,  
outgoing spokesperson for the Swedish National Innovators' Council