

## **ONE STEP CLOSER TO HYPERLOOP. WHAT HAPPENED IN 2020 AND WHAT TO EXPECT IN THE FUTURE?**

- **Despite the pandemic, 2020 brought many successes in the area of hyperloop technology development and the dynamic of progress will not slow down in 2021**
- **Success in the area of this technology development is mainly being achieved by private companies, however, more and more initiatives are being developed with the support of governments and European institutions**
- **In 2021, Nevomo plans to launch the first magnetic rail technology tests on a full-scale - milestone bringing hyperloop technology closer to implementation**

**Warsaw, January 13, 2021:** We will remember 2020 not only because of the SARS-CoV-2 pandemic. 2020 is also a world breakthrough year for the development of hyperloop – the magnetic vacuum railway. Everything indicates that 2021 will be also very interesting, especially for Nevomo (formerly Hyper Poland) that plays an important part in the implementation of the technology enabling travelling at speeds up to 1000 kph (620 mph). The company is preparing to start the first magnetic rail technology tests on a full-scale track. It is a major step towards implementing hyperloop in stages, leveraging existing railway infrastructure.

### **2020 was a year of change and development for hyperloop**

The fact that the year 2020 played a significant role in the development of hyperloop is undeniable - successes in this area were not only achieved by private companies, but the technology has also become more and more popular with government representatives. At the end of July, the U.S. Department of Transportation has issued guidelines establishing regulations for hyperloop technology, and the EU Member States have formed a Joint Technical Committee to oversee the development of common standards and methods of operation. A breakthrough that brings us closer to the development of the technology was also the **test ride of the Virgin Hyperloop capsule with passengers onboard or the establishment of the Hyperloop Development Program**, a project in which participate leading European companies, including Nevomo.

Nevomo is focused on the development of key hyperloop components: propulsion, levitation, and control subsystems. **They can also be implemented as part of a unique magrail technology invented by Nevomo – this is a solution that allows for the use of magnetic levitation within the existing railway infrastructure and a stepwise approach to hyperloop.** Consequently, the most modern means of transport can be implemented as a retrofit of existing railway lines, and hence it will not require huge investments in the construction of new transport corridors. **The vehicles will be able to move at speeds up to 550 kph (340 mph).**



The company consists of a multidisciplinary team of experts with experience gained from among others Airbus, Bombardier, Transrapid Maglev. The Nevomo team has been twice the finalist of the SpaceX Hyperloop Pod Competition (2016 and 2017) and the finalist of the Build Earth Live Dubai. In 2019 Nevomo was classified by Lufthansa Innovation Hub among 150 top mobility startups and in 2020 it was awarded as the most innovative railway construction company in Europe by BUILD magazine.

Last June Nevomo also established cooperation with IDOM – a Spanish company that is a global leader in infrastructure design and analysis. IDOM supports Nevomo with its experience in the design of high-speed railway lines and traffic research as well as business analyses related to their development. **Together with IDOM, Nevomo has developed a preliminary feasibility study for the implementation of magrail (magnetic rail) on the Warsaw - Lodz - Wroclaw/Poznan line.**

### **Development initiatives on a European scale**

Europe very seriously prepares for the introduction of hyperloop technology. In February, a key decision was taken in Brussels to establish a Joint Technical Committee of CEN and CENELEC (JTC 20). It aims to create a uniform system and technical standards and regulations of ultra-fast transport throughout the continent.

One of the ground-breaking initiatives that may accelerate the development of technologies based on the idea of hyperloop in Europe is **the 'HyperNex: Ignition of the European Hyperloop Ecosystem' project lead by the Shift2Rail initiative**. The project aims to start joint research and cooperation between businesses, research centers, and R&D institutions interested in developing a new generation of transport systems such as hyperloop. Nevomo is responsible for coordinating innovative concepts suitable for guided transport modes.

Nevomo will also take part in another **European-level initiative - the Dutch Hyperloop Development Programme (announced last December)**. The launch of the programme is planned for the beginning of 2021. It will include, for instance, the creation of the European Hyperloop Centre with a 2.6-kilometre test track.

Jeroen in 't Veld, president of the Hyperloop Development Programme points out: *“With its expertise, Nevomo will make a valuable contribution to the R&D activities on engine and power system design that will be carried out within the Cargo working group. Global projects such as the development of hyperloop technology can only be achieved through collaboration between players both from the private and public sectors.”*

### **A green opportunity for hyperloop**

The coronavirus pandemic did not overshadow the environmental and climatic disaster threat. Over the next few years, the reduction of CO2 to the atmosphere will be a key action for many entities, which is confirmed by the European Commission's initiative – European Green Deal adopted by the EU in early 2020.



An important area where changes in the reduction of the carbon footprint are needed is mass transport. The search for alternative, green solutions is a major challenge for both engineers and decision-makers. Technologies like the hyperloop can be the key to solving this problem.

Johannes Braun who joined Nevomo's Advisory Board in 2020 says: *"Comfortable, safe, and environmentally friendly travel between city centers from e.g. Warsaw to Berlin in less than two hours is no longer a vision – it is technically feasible."* Previously Braun was responsible for the record-speed construction of the Transrapid Maglev project in Shanghai.

### **Challenging plans for the future**

Nevomo has already completed the first magrail tests on a **medium-sized track – with a focus on the performance of a linear motor. In mid-2021 the company plans to start full-scale tests.**

Przemyslaw Paczek, CEO and co-founder of Nevomo says: *"Thanks to the experience gained from last year's medium-scale tests, stepping onto the full-scale track will be much easier for us. Our experience also allows us to minimize the risk of making mistakes, which would be much more serious on a larger scale. Our current priority is to launch the pilot program and certification process as soon as possible. We want to make sure that the magrail technology will be ready around 2024-2025 to sign the first commercial implementation contract."*

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### Notes to editors

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### **ABOUT NEVOMO**

**Nevomo (formerly known as Hyper Poland) is a leading supplier of innovative key components for hyperloop and the next generation of high-speed railways (magrail).** Its unique approach will enable quick and gradual implementation of transport systems inspired by the hyperloop concept, starting with the use of the existing corridor routes and railway regulations. By adapting the existing railway infrastructure, the company aims to enable travel with a speed of up to 550 kph. This will be possible thanks to the development of the **magrail technology**, a magnetic railway system that makes use of the existing railway tracks. Both traditional trains and magrail vehicles can move on the same railway tracks interchangeably. Magrail is the first step in **hyperloop development**.

Nevomo has so far financed its activities by combining research and development grants, as well as equity crowdfunding (Seedrs) and business angels investment. In December 2020, Nevomo got a new investor - Hütter Private Equity, a leading CEE family office founded by Piotr Hütter, a successful pharma entrepreneur who had exited to Warburg Pincus in 2015. Total funding (both equity and grants) raised by Nevomo has exceeded EUR 6.6 million.