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AS BERCMAN TECHNOLOGIES

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# **COMPANY DESCRIPTION**

For the public offering of shares and admission  
to trading on the First North multilateral trading facility (MTF)

# BRIEF SUMMARY

This company description has been prepared for the offer and subsequent admission to trading on the First North MTF operated by Nasdaq Tallinn AS ('**Exchange**') of the new shares ('**Offer Shares**') issued by AS Bercman Technologies (public limited company registered in Estonia under the registry code 14134425, '**Bercman**' or '**Issuer**'). The company description has been prepared in accordance with the rules and regulations established by the Exchange for the First North MTF ('**Rules and Regulations**'). This company description may not be used for any other purpose without prior permission from Bercman.

Founded on 17 October 2016, Bercman is a deep-tech company focused on the development and sale of smart traffic infrastructure. The company's core competencies lie in high value-added software and expertise in its area of activity. In addition to software, Bercman also develops hardware in-house, but uses contracted partners for production activities. Bercman's main product is the constantly evolving Smart Pedestrian Crosswalk, a machine vision-based unregulated pedestrian crossing safety system. In addition to the main product, Bercman offers tailoring development solutions for large customers. In order to carry out large-scale IoT projects and further develop its own products, Bercman acquired a 100% stake in Krakul OÜ at the end of 2021. Bercman's subsidiary Krakul OÜ (Estonian company established on 22 April 2013 with registration code: 12458980, '**Krakul**') is an information technology company focused on the development of the Internet of Things and autonomous platform solutions. Krakul offers customers a complete product development solution from concept to production.

The company's team consists of experienced electronics, software and product development engineers with strong expertise and competences in areas such as automotive industry, autonomy, micromobility and smart cities. Krakul and Bercman together form the Bercman Group ('**Bercman Group**').

The public offering of the Issuer's shares will be conducted only in Estonia pursuant to Article 3(2)b of Regulation (EU) 2017/1129 of the European Parliament and of the Council ('**the Prospectus Regulation**') and subsection 15 (1) of the Securities Market Act of the Republic of Estonia ('**the SMA**'), according to which a public offer prospectus does not need to be published if the total consideration of the public offering of securities does not exceed €5,000,000 euros per all the Contracting States in total calculated in a one-year period of the offering of securities. The company description is not a prospectus within the meaning of the Prospectus Regulation or the SMA Pursuant to clauses 1 (3) 2) and 3) of the Minister of Finance Regulation No 7 of 21 February 2022 on the requirements for an information document for a securities offering ('**the Regulation**'), the Regulation does not apply to the Offering and the description of the company is not an information document within the meaning of the Regulation. The information provided in the company description has not been verified or approved by the Financial Supervisory Authority or any other national supervisory authority.

The Offering is aimed at Estonian retail and institutional investors who are qualified investors as defined in Article 2(e) of the Prospectus Regulation. In addition to the Offering, Bercman has the right to offer the Offer Shares to

institutional investors outside Estonia provided that such investors qualify as professional investors within the meaning of Article 2(e) of the Prospectus Regulation. The Offering takes place only in Estonia and the Offer Shares are not offered in any other jurisdiction.

The offering will involve the Issuer offering up to 151 261 Offer Shares at a price of €6.18 per Offer Share (**the Offering**). If interest in the Offering is high and the demand of investors exceeds the number of Offer Shares, the Issuer may increase the number of Offer Shares by up to 20%, i.e. to a maximum of 181 513 Offer Shares.

The period of offering the Offer Shares will commence on 22 April 2022 and end on 2 May 2022 (**the Offer Period**).

Bercman shares (**the Shares**) are traded on the Exchange's First North MTF since 6 July 2021. Bercman files an application with the Exchange for admission to trading of the Offer Shares on the Exchange's First North MTF, and the trading of the Offer Shares is expected to commence on First North on or at around 17 May 2022.

### Warning on the risks associated with the Offering

Participating in the Offering and subscribing for and investing on the secondary market in Bercman's Shares carries certain risks. Potential investors are advised to read the company description fully before making a decision to invest. In particular, we advise reading section 4 'Risk Factors' for information on factors to consider when investing in Bercman's Shares, incl. the risks related to the Offering of Shares, the Issuer's area of activity and the Shares of the Issuer and the Offer Shares. By participating in the Offering, the investor acknowledges the risks set out in this company description, including the risk

that the Shares may lose some or all of their value. Although Bercman has made all reasonable efforts to ensure that this company description provides an accurate and adequate overview of Bercman Group, its operations, and the Offer Shares, the value of an investor's investment in the Offer Shares may be affected to a significant degree by circumstances which had not arisen by the date of publishing this company description or which are not reflected in the company description. The information presented in the company description should not be construed as legal, financial, or tax advice. The company description is not investment advice or a recommendation to purchase the Offer Shares. The suitability of the Shares for potential investors has not been assessed according to the experience and knowledge of the investors. Whether investing in the Offer Shares matches the investor's financial capabilities and investment objectives and whether such investment is in accordance with the rules, requirements, and restrictions to which the investor is subject should be decided by each potential investor independently, engaging the services of a professional legal, financial, or tax adviser where necessary.

### Restriction on publication

The information contained in this company description is not intended for publication, distribution or transmission, in whole or in part, directly or indirectly, in the United States, Australia, Canada, Hong Kong, Japan, Singapore, South Africa or any other country or circumstance in which such publication, distribution or transmission would be unlawful or to any persons to whom the competent authorities have applied financial sanctions. The Offer Shares are being publicly offered only in Estonia, and no sale or offer of the Offer Shares will take place in any jurisdiction in which such offering, invitation or

sale would be unlawful without an exception or qualification contained in the law, or to any persons to whom the competent authorities have applied financial sanctions.

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# 1 INTRODUCTORY REMARKS

## 1.1 Applicable law

This company description has been prepared in accordance with the legislation of the Republic of Estonia and with the Rules and Regulations, and it is governed by the law of the Republic of Estonia. Any disputes arising from or in relation to the company description shall be resolved in Harju County Court.

First North is a multilateral trading facility (MTF) within the meaning of subsection 3 (3) of the SMA, operated by Nasdaq Tallinn AS, and is not a regulated market within the meaning of the SMA or other legislation.

## 1.2 Responsible persons

The persons responsible for the information provided in the company description are the members of Bercman's management board. The Management Board hereby confirms that, to the best of its knowledge, the information contained in the company description is in accordance with the facts and contains no omission likely to affect the import of the company description. The details of the Management Board can be found in point 4.2.

The Management Board of Bercman is responsible for the correctness and accuracy of the information contained in the company description as of the date of the company description, i.e. 13 April 2022.

## 1.3 Terminology and rounding

The capitalised terms in the company description carry the meanings defined in section 7 or elsewhere in the company description.

The figures and quantitative values contained in the company description (e.g., monetary values, percentages, etc.) have been given with a degree of precision deemed by Bercman to be reasonably sufficient and adequate for the purposes of information, while avoiding excessive detail. Quantitative values have in some cases been rounded to the nearest decimal point or whole number. Due to this, data presented as percentages may not always add up to 100%. Financial data have been presented in euros.

## 1.4 Accessibility

The company description can be accessed on the website of the Exchange ([www.nasdaqbaltic.com](http://www.nasdaqbaltic.com)) as well as the website of Bercman ([www.bercman.com](http://www.bercman.com)).



## 2 PURPOSE OF RAISING FUNDS AND EXPECTED BENEFITS

Bercman launches the Offering to raise additional funds for the development of its business and for the achievement of its mission and vision. The Offering is a private placement and eligible participants are all legal entities and natural persons in Estonia who have a securities account opened with an account manager (bank) of Nasdaq CSD. Bercman plans to use the funds raised during the Offering to contribute to reducing avoidable road accidents in target countries through expansion into new markets and to support the accelerated introduction of self-driving vehicles through product development. Bercman expects the above to help it become the

preferred partner in the development of smart city solutions and innovative mobility products and services on all markets to which it intends to expand. The estimated volume of the company's Offering is approximately €935 000, or, in the event of oversubscription, €1 121 750 if the volume of the Offering is increased.

Bercman has estimated the costs related to the organisation of the Offering, including the remuneration of the persons involved in the organisation of the Offering at approximately €50,000, so the net proceeds of the Offering will be €885 000, or €1 071 750 if the Offering is oversubscribed.

The proposed distribution of the proceeds of the Offering is as follows

Activity priority	Approximate cost of activity	Description of activity
1	487 000	<p><b>Expanding into new markets.</b> The total international market for intelligent transport systems (ITS) was estimated at €37 billion in 2021. It is a fast-growing market, expected to reach €60 billion by 2026. Bercman is active in the largest market segment, the advanced traffic management systems, which accounts for 38% of the total market. Bercman sees Europe as the main target market for its products and services. This is due to the ever-increasing number of motor vehicles in Europe, the lack of safe infrastructure solutions, the European Union's desire to reduce negative impacts on the environment and the desire of local authorities to make transport more efficient.</p>



2 / Purpose of raising funds and expected benefits

Activity priority	Approximate cost of activity	Description of activity
		<p>Bercman's focus in 2022 and 2023 is to significantly increase sales volumes, which will require entering new markets in addition to expanding in existing ones. In new markets, the focus will be on finding high-profile distribution partners, with 1-4 partners in each export market, depending on the specificities of the market. Active communication with potential distribution partners for the sale and installation of Bercman products is ongoing in the markets of Italy, Finland, Spain, Slovakia, Bosnia and Herzegovina, Portugal, Czech Republic, Poland, Scotland and Belgium. If these contacts were to materialise, Bercman would have a total of 23 distribution partners in 16 European countries. However, Bercman needs additional resources to service new sales partners and to launch pilot projects in these markets. The first non-European market the company is communicating with is the United Arab Emirates, for the testing and sale of intelligent street infrastructure solutions to Dubai. Bercman is willing to take this detour from his European strategy in order to increase its sectoral experience in traffic surveillance, with a view to applying this knowledge in Europe at a later stage.</p>
2	398 000	<p><b>Product development.</b> Bercman is a rapidly growing company focused on upgrading and adapting existing products to new markets and customer needs. Thus, Bercman is looking to launch software and hardware upgrades for the Smart Pedestrian Crosswalk later this year, enabling new functionalities. The new functionalities create the possibility to package Bercman product solutions in different configurations or to upgrade already sold equipment. As an example, the company plans to develop a more powerful energy storage system for the Smart Pedestrian Crosswalk to make the energy-friendly version of the product even easier to implement in locations with limited access to electricity. As another example, we are planning to upgrade the Smart Pedestrian Crosswalk system with the automatic licence plate recognition functionality, so that on a section of road equipped with two or more Smart Pedestrian Crosswalks (a 'smart road'), it will be possible to measure the average speed to improve traffic behaviour. Bercman's market experience to date and its interaction with distribution partners has shown that such technological upgrades would increase the benefits of Bercman's technologies for end-users, and thus their sales potential.</p>

In the case of undersubscription, the revenue raised will be used in accordance with the priority of the action, ensuring in particular that the expenditure foreseen for the first priority actions is covered. In the event of an oversubscription, the expenditure intended for the activities will be increased proportionately.

As Bercman Shares are already traded on the First North alternative market and the Offer Shares are of the same class as the existing Shares, Bercman will also request that the Offer Shares be admitted to trading.

The objective of the tradability of the Shares is to maintain the attractiveness and liquidity of the Shares for investors. Public company status also ensures transparency and credibility for Bercman's shareholders and investors.

## 3 BERCMAN'S BUSINESS OVERVIEW

### 3.1 Information under corporate law

AS Bercman Technologies is a public limited company established in Estonia on 17 October 2016.

Bercman's main data:

- registry code: 14134425;
- address: Riia 26, 50405, Tartu, Estonia;
- LEI code: 648889296M29DQBJCY58
- website: <https://www.bercman.com/>
- e-mail: info@bercman.ee;
- phone: +372 53402902;
- VAT No.: EE101977472;
- principal activity: other manufacturing n. e. c. (32991, Classification of Economic Activities 2008).

Bercman's subsidiary is Krakul OÜ, in which Bercman has a 100% holding. Krakul, established on 22 April 2013, is an information technology company focused on the development of the Internet of Things and autonomous mobility systems.

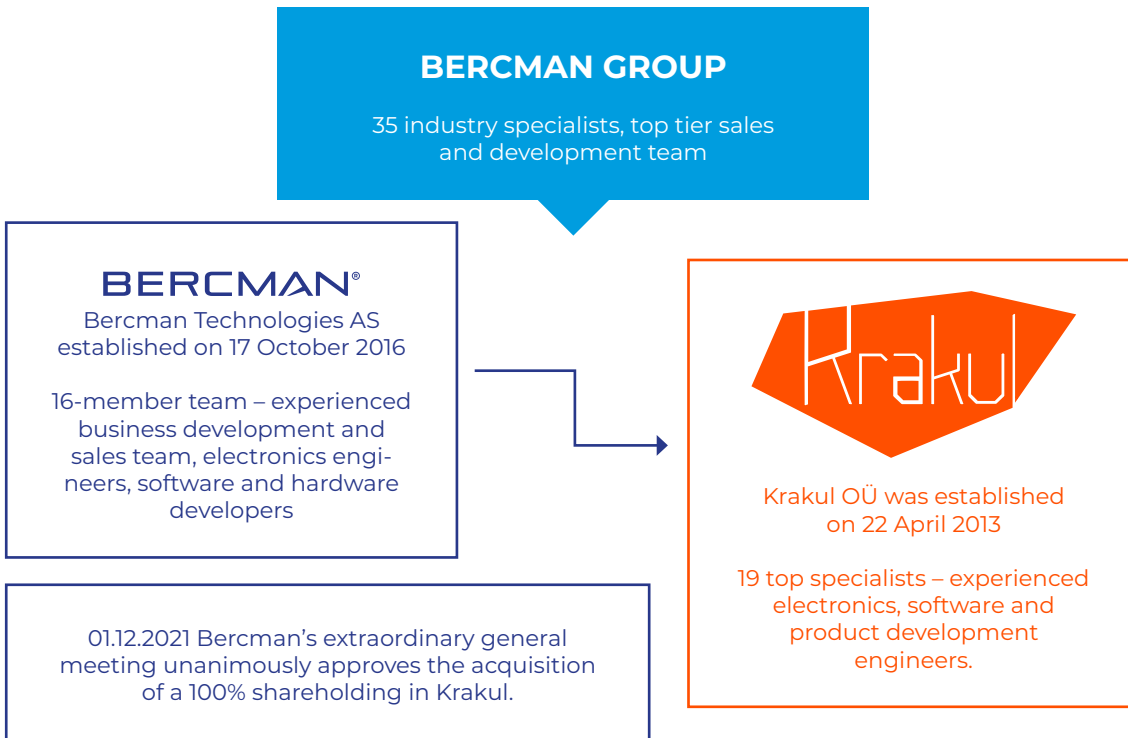
Bercman has a two-member Management Board comprising Mart Suurkask and Jaan Hendrik Murumets. Bercman's Supervisory Board consists of three members: Kuldar Leis, Raimond Russak and Tarvi Thomberg. Bercman employs sixteen people.

Bercman's Article of Associations is appended to this description as Annex 1.

### 3.2 Issuer's activity, history and evolution

Bercman Group is a group of companies formed in the fourth quarter of 2021, whose parent company is Bercman Technologies AS (Bercman), which operates in the field of road safety, and its subsidiary is the Internet of Things developer Krakul OÜ (Krakul). The Group is a strategic alliance which aim is to help its parent company bring product solutions with better scalability and cost-effectiveness to more markets, and to help its subsidiary gain a commercial foothold in the rapidly developing but highly promising areas of smart cities and future transport. The existence of the group also enables the provision of more complex and larger-scale custom solutions.

To see these development objectives through, Jaan Hendrik Murumets, CEO of Krakul (winner of the Young Entrepreneur of the Year 2020), joined Bercman from Krakul as the new Chief Technology Officer. His task is to lead the development teams of the two companies to reach the objectives set and maximise collaboration.



Companies in Bercman Group are part of the 2%-club of innovation-intensive Estonian companies who invest more than 2% of their turnover into research and development.

**Bercman Technologies AS**

Bercman Technologies AS or Bercman ([www.bercman.com](http://www.bercman.com)) is a deep-tech company founded in Tartu in 2016 and primarily deals with the development and selling of road safety and mobility related technologies and products in European markets. What makes Bercman unique are the in-house developed software solutions that are implemented in the products, allowing the company to offer significantly more functionality than competing products in a similar budget range.

The company's story started when co-founder Mart Suurkask started looking for a cost-effective solution to increase road safety at crossings following an event which affected him personally. It seemed that a solution to this problem should be a smart system that uses

state-of-the-art sensor technologies to reduce the risk of collision with road users more than any previous solutions.

In autumn 2016, Mart founded Bercman Technologies AS to bring his idea into life. Not long after, seasoned entrepreneur Kuldar Leis joined the efforts to develop the company. From 2018, Bercman has been working on several product developments, mainly the following:

- **Smart Pedestrian Crosswalk** or an unregulated crosswalk safety system based on machine vision. The product takes into account the needs of today's traffic environment as well as potential developments in connected, automated and autonomous vehicles. To this end, the Smart Pedestrian Crosswalk supports interfacing with standardised vehicle-to-everything (V2X) hardware and software. The company has created a special portal for daily operation of related devices called the Bercman Management Console (BMC).

- **Smart Intersection Control** or a traffic-light-regulated crosswalk safety system based on machine vision for increased adaptivity in intersection management. The hardware and software solutions are based on the Smart Pedestrian Crosswalk and it enables the addition of similar and additional safety functionalities to regulated intersections to ensure timely information and safety for road users. The control unit can be installed on all existing intersections regulated by traffic lights.

In addition to these product solutions, Bercman also offers custom solutions to boost road safety, such as the product developed for Operail to meet the requirements of the European Train Control System, or Estonia's first road section designed to measure average movement speed developed for Põlva rural municipality government.

Bercman is involved in **ITS Estonia** and the international **CCAM** network to participate in the development of the transport sector on a daily basis. The company takes part in research-intensive collaborations with a number of research institutions, most notably the University of Hamburg and the Artificial Intelligence Center of Hamburg (ARIC). As of this year, development results will be tested at the **TAVF** testing campus for autonomous vehicles in Hamburg. The company is working with the laboratory for self-driving vehicles of the **University of Tartu** to develop the environmental perception of **Bolt's** self-driving vehicle in Tartu and test it in the provision of on-demand transportation solutions.

### Bercman's target markets

Bercman's current clients are located in European countries where road safety is an above-average problem or which are generally open to road safety innovations. Today, Bercman has entered six markets in Estonia, Lithuania, Croatia, the United Kingdom, Greece and Switzerland.

In 2021, exports accounted for 50% of Bercman's turnover. The company strives to take its export ratio to 80% by 2024 at the latest, and to achieve this, Bercman wants to expand both in its current target markets and into new markets (see subsection 3.3.1).

### Bercman's clients

Bercman serves both the public (B2G) and private (B2B) sector on a daily basis. B2G clients are local governments and B2B partners are companies specialised in infrastructure solutions, telecommunications companies and real estate developers.

#### B2G clients:

- **Viimsi rural municipality government** – collaboration with Viimsi rural municipality government as one of the most innovative local governments in Estonia started 2020 with the pilot project for the Smart Pedestrian Crosswalk. Today, they are an excellent partner and also a piloting client for Bercman's Smart Intersection Control.
- **Tartu city government** – Bercman's very first client who started the acquisition process of various prototypes of the Smart Pedestrian Crosswalk already in 2019. The city of Tartu is now home to Estonia's first Smart Pedestrian Crosswalk with V2X readiness. Tartu is also a Living Lab city, allowing Bercman to pilot the most innovative mobility concepts.

- **Haapsalu city government** – the client wants to increase the safety of vulnerable road users, especially in the vicinity of artery roads. Haapsalu is also home to Estonia's first battery-powered Smart Pedestrian Crosswalk that is charged at night using the network of street lamps.
  - **Kuressaare city government** – one of Bercman's largest clients, currently still in the piloting phase. Kuressaare is scheduled to be equipped with its first three Smart Pedestrian Crosswalk kits in May 2022.
  - **Saue rural municipality government** – Bercman's client interested in ensuring road safety around the secondary school stadium that sees high traffic volumes. The collaboration between Bercman and Saue will result in the installation of the first Smart Pedestrian Crosswalk in May 2022.
  - **Narva-Jõesuu city government** – Bercman's client intent on calming traffic near Narva-Jõesuu Secondary School to increase safety for children on their way to school using Smart Pedestrian Crosswalks. Four Smart Pedestrian Crosswalks will be installed in May 2022.
- B2B partners:**
- **Eismo Valdyma Systemos (Lithuania)** – according to estimates provided in various European reports, road safety in Lithuania is among the worst in the EU. For this reason, a company with more than 15 years of experience in providing infrastructure solutions approached Bercman to offer efficient solutions for the Lithuanian market to increase the safety of vulnerable road users. The Smart Pedestrian Crosswalk was introduced in the city of Panevėžys as part of a pilot project and we are currently working together on new follow-up projects.
  - **AI (Croatia)** – Bercman's key partner and Croatia's largest telecommunication company. The company has a very large client base, granting Bercman good access to the entire Croatian market. AI has high demands, but they are also an innovation-driven partner who has helped Bercman establish its own processes to serve the Central European market.
  - **Clearview Intelligence (United Kingdom)** – Bercman's first foreign partner. Clearview Intelligence has been providing infrastructure solutions for more than 40 years and sees Bercman as a partner who can bring them the next level of innovation. Clearview Intelligence is primarily interested in collaborating on the large-scale implementation of V2X solutions in the UK.
  - **Eur.Elec (Greece)** – a company specialised on infrastructure solutions with a wide client base in Greece and Cyprus. In addition to selling Smart Pedestrian Crosswalks, Eur.Elec has also expressed an interest in integrating our technology into a comprehensive package with other elements designed to improve road safety (such as lighting fittings built into the road surface) to increase its attractiveness in local smart city tenders which also constitute the company's main sales channel.
  - **Swisstraffic (Switzerland)** – a partner experienced in dealing with smart cities and more than 20 years of history in providing infrastructure solutions. Work on the partnership started in the fourth quarter of 2021 and has reached the Smart Pedestrian Crosswalk pilot project phase. Swisstraffic is a partner exclusively interested in cutting-edge innovation (including V2X solutions).

### Bercman's subsidiary Krakul OÜ

Krakul OÜ or Krakul ([www.krakul.eu](http://www.krakul.eu)), founded in 2013, is a leading Estonian developer of the Internet of Things and autonomous systems offering comprehensive product development solutions from concept to prototype to production.

Krakul employs 22 top professionals: the company's team includes experienced electronics, software and product development engineers with strong expertise and competences in areas such as automotive, autonomy, micro-mobility and smart cities.

Krakul actively takes part in the work of professional associations: Krakul belongs to the Estonian Electronics Industries Association and its CEO Jaan Hendrik Murumets is a member of the Council of EEIA. Krakul is also a member of the Estonian Defence Industry Association and its Software lead Jaan Viru is a member of the EDIA Council.

Krakul values strong partnerships: In 2020, Krakul signed a partnership agreement with Richardson RFPD, one of the world's largest manufacturers of wireless connectivity components. The collaboration means that Richardson will involve Krakul in large-scale international IoT development projects and Krakul will be able to market its services through Richardson's channels. In addition, notable partners working with Krakul include Incap Estonia, a subsidiary of Incap Corporation, listed on the Helsinki Stock Exchange. The companies work together to serve common clients.



### Krakul's target markets

Krakul's paying clients are mainly from Estonia and sales to the Estonian market accounted for 78% of the company's turnover in 2021. The remaining 22% resulted from export to six countries: Latvia, Finland, Germany, Singapore, the United States and Switzerland.

Many of Krakul's clients export their products and services all over the world, meaning that Krakul's solutions can be found in many locations around the globe. Krakul's team has completed a total of more than 100 international development projects in the Baltics, USA, Finland, Sweden, Switzerland, Mexico, Vietnam and many other countries.



### Krakul's clients

Krakul values long-term relationships with its clients, and the company's clients range from start-ups to large international corporations, with needs ranging from product development concepts to manufacturing.

#### Aeronautics and space:

- **Stereo cameras for NASA's mission to the Moon** – in collaboration with Crystalspace and Tartu Observatory of the University of Tartu, Krakul developed stereo cameras that form part of the robotic arm of Maxar Technologies which will be taken to the Moon as part of NASA's mission.
- **Unmanned aerial vehicles** – Krakul's client is Threed System for whom Krakul designs electronics and integrates subsystems.

#### Smart city and future transport:

- **Self-driving buses** – Krakul provides consultations for AuVe Tech, a company developing self-driving cars, and develops the electronics. Krakul is responsible for system integration, subsystem integration and prototyping.
- **Smart bike parking** – micro-mobility company Bikeep is working with Krakul to develop smart bike parking, bike racks and related technology. Bikeep has over 2400 solutions in 28 countries. In collaboration with the client, brainstorming sessions were conducted for use cases and functionalities, an electronics solution and mechanical integration were developed and Krakul is providing ongoing support.

- **Parking systems** – Krakul developed the electronics for Barking, was responsible for mechanical integration and industrial design, and provides ongoing support.
- **Electric bikes** – Krakul is partnered with electric bicycle manufacturer Ampler Bikes.

#### Other:

- **Smart access systems** – Krakul has developed smart access systems for Valnes, a company that manufactures and sells locking and security products, for use in Estonia, Latvia, Lithuania, Poland and Finland. Valnes' systems are also used in schools in Tallinn. Krakul developed the electronics and hardware and was responsible for the mechanical integration, scalability, optimisation, and provides ongoing support and upgrades.
- **Smart bottle opener** – Krakul helped to develop a smart bottle opener that takes a picture of the cork when opening a beer bottle so as to map in real time when, where and what kind of drink clients are consuming. Such data are useful for both the beverage industry and distributors, and the solution is in use in several countries.
- **Smart insoles** – Krakul is helping to develop insoles for international professional athletes. Such insoles include a smart technology layer that provides athletes with data on their foot placement and movement to help prevent injuries.
- **Smart massage equipment** – Krakul further developed the electronics design for the Beautiful Me roller massage company, which has allowed the company to expand in Estonia as well as enter export markets in Finland, Sweden and Australia.

- Production monitoring equipment** – Krakul, in collaboration with Evocon, has developed a production monitoring device that collects data to analyse production processes. Krakul developed software and electronics, was responsible for mechanical design, hardware development, connectivity options and provides ongoing support.
- Marine buoys** – Krakul designed the electronics for Flydog Marine’s data buoys, which collect data for the marine sector in water bodies. Krakul was responsible for platform development, system integration, electronics design and software development.

**Krakul’s development priorities**

The number of devices connected to IoT is projected to multiply in the coming years, with a global compound growth rate of 25.4% for the market (between 2021 and 2028). (Fortune Business Insights). Therefore, in the short term, Krakul wants to gain broad exposure, in particular to various smart city and future transport projects, to stand out from current competitors.

Krakul sees export markets as a source of growth for the future and plans to actively seek new clients in foreign markets. To this end, Krakul plans to expand its team in 2022 and make investments to train its employees and purchase new equipment to make the next growth leap. First and foremost, it means that the company wants to tackle its current No. 1 bottleneck, i.e. improve the management of client expectations to reduce the time spent serving each client..



### 3.2.1 Bercman's mission and vision

Bercman's activity is inspired by Vision Zero. Vision Zero is a strategic traffic philosophy originating from Sweden, which recognises that in order to eliminate accidents, the design of the traffic environment must take into account that people make and will continue to make mistakes. Therefore, if we want to increase safety, then instead of teaching road users, we need to implement solutions that help to prevent accidents caused by people completely.

Bercman supports Vision Zero and the widespread deployment of self-driving vehicles by developing products designed to be able to interact with all participants in the traffic environment. Essentially, in the future, all the solutions developed by the company will be

in active dialogue with other infrastructure equipment as well as with the vehicles themselves, to make sure the traffic environment is as safe and nature-friendly as possible. For example, a self-driving vehicle does not have to stop at a stop line if nearby Bercman technology confirms that there are no approaching vehicles and a green light is given to proceed.

- Bercman's mission is to avoid and prevent avoidable road accidents and to accelerate progress towards the widespread adoption of self-driving and connected vehicles to achieve this aim.
- Bercman's vision is to become the partner of choice for the development of smart cities, smart roads and other innovative mobility products and services aimed at improving road safety and people's quality of life.



### 3.2.2 Main growth barriers

Bercman wants to transform its current growth barriers into competitive advantages for tomorrow. The company has experienced a number of growth barriers in its history, the main ones being:

- **Long and resource-intensive sales processes**, which have caused Bercman to take a long time to build up its partner network. Due to Bercman's field of activity, where the public sector is the main end-client, our current partners want maximum protection against any commercial risks. This means that new partnership agreements are very thorough and require constant attention from many members of the team, as well as ongoing dialogue with existing and potential partners. Up until now this has meant that instead of looking for new partners, Bercman's business team has had to focus on resource-intensive negotiations with already partially committed partners. However, after the initial public offering (IPO), the company was able to hire the former business development manager of Cybernetica AS, who has made this process significantly more efficient. Nevertheless, we still see the need for new sales resources to launch new collaborations on a wider scale.
- Market entry is hindered by the **lack of sufficient capital for product localisation**. Despite the fact that the company only operates in Europe, there are differences in the internal market and the company's products need to be adapted to specific markets, especially in the so-called old Member States. Following the IPO, Bercman has been able to address localisation issues, in particular for the Croatian and Greek markets. However, this continues to be a growth barrier as Bercman, for example, currently needs to create specific LED indicator lights in non-standard dimensions for the Smart Pedestrian Crosswalk for the Swiss market.
- The company has **insufficient stock levels** due to lack of capital. Up to now, the company has generally ordered small quantities of finished equipment, which has resulted in a relatively high cost price for the equipment. Low stock levels also mean that the company cannot service urgent projects. The situation has improved since the IPO, but there are increasingly more projects on the horizon where Bercman needs to be able to deliver dozens of units at a time. The contracting authorities in such projects are highly trustworthy, but they are known to have long payment deadlines (up to 60 days), which is difficult to service given Bercman's high rate of cash outflow and current component delivery times.
- As a new growth barrier, Bercman is increasingly experiencing that **end-clients see limited value in traffic data**, which limits the company's potential for exponential growth in the future. All of the world's leading tech companies have now recognised that the future belongs to data, and the winners will be those who can successfully implement said data. Today, Bercman's technologies collect large volumes of traffic data, the real value of which end-users are currently unable to appreciate. With Krakul's help, Bercman wants to shift focus more on developing products to collect even more first-level data (e.g. number recognition to measure average speed), but also on valuing data and educating end-clients so that they can clearly see that data can save money and lives.





### 3.2.3 Bercman's products

Bercman's product solutions are intelligent transport systems, i.e. up-to-date applications that use information and communication technologies to make the surrounding traffic environment more efficient and safer.

Bercman's portfolio includes two main technologies: the **Smart Pedestrian Crosswalk** designed for uncontrolled crossings and the **Smart Intersection Control** for automated intersection management. In addition, we develop **custom solutions** based on the client's needs, the best example of which is the product developed for **Operail** which must meet the requirements of the European Train Control System.

#### Smart Pedestrian Crosswalk

**The Smart Pedestrian Crosswalk is a safety system for unregulated crossings that uses various sensors to monitor traffic in order to reduce traffic conflicts between road users.**

The main purpose of the system is to increase the awareness of nearby road users and alert

them to the possibility of a dangerous situation as needed. Such situations are detected using machine vision algorithms, which are tasked with following the movement trajectories of road users and detecting overlaps. As a result, the device operates in two regimes:

- Regular regime. The system monitors nearby road users, and approaching vehicles are alerted by a light signal to the presence of a road user crossing the road.
- Hazard regime. The system monitors nearby road users, detecting a threat when trajectories overlap. Approaching connected vehicles are alerted by an automatic V2X message and, if necessary, the automatic braking pilot assist system will be activated. The driver is warned by a light signal, and the crossing road user is warned by an acoustic signal. An emergency regime solution is being developed and will be implemented between 2022 and 2023 if possible. The specific timetable will depend on collaboration with a suitable car manufacturer to test the solution.

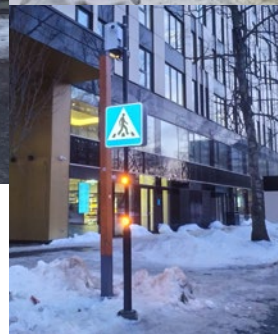
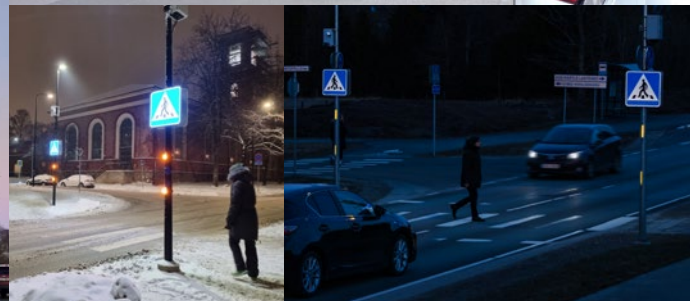
Benefits of the Smart Pedestrian Crosswalk for client groups:

- Direct economic benefits from increased road safety. Bercman commissioned TalTech to conduct a study on a Smart Pedestrian Crosswalk installed in 2021 to assess its impact. Based on the results, it can be concluded that the Smart Pedestrian Crosswalk reduces the potential for dangerous situations on average by 45% (generalisation of the results would require a wider study). Given that road accidents cost countries on average 2-5% of their gross domestic product (Sung, Rios 2015), every accident avoided is of high value.
- Indirect economic benefits from additional system functionalities. The additional functionalities provided by the system can be harnessed for data collection. The resulting data can be used for better traffic and living environment planning, implementing new business models or for scientific purposes.

The Smart Pedestrian Crosswalk development is an ongoing process. As an example, we are developing automatic emergency call functionality for the Smart Pedestrian Crosswalk to use sensors to detect road accidents as they occur and immediately notify operational units thereof.

**Smart pedestrian crosswalks in Europe**

To date, counting Estonia, Bercman has entered six markets in Europe with its Smart Pedestrian Crosswalk solution. In Estonia, the Smart Pedestrian Crosswalks have been installed in Viimsi, Tartu, Tallinn, Haapsalu and this spring we will add Kuressaare, Saue and Narva-Jõesuu to that list. Other places now equipped with the Smart Pedestrian Crosswalk include Ivanicgrad in Croatia, Trikala in Greece, Milton Keynes in the United Kingdom, Ittigen in Switzerland and Panevėžys in Lithuania.



## Smart Intersection Control

In 1914, the world's first electric traffic light was introduced in the United States. This means that as of today, traffic light technology has been around for more than 100 years and its development has been rather modest. On the one hand, traffic lights solved a major concern – they brought more clarity to road behaviour and made it more systematic, but on the other hand, traffic lights increased road users' frustration over inefficient over-regulation. This inefficiency has created a situation where people risk their lives every day to save a few seconds on their journey because they see that the traffic lights we use today are not wisely managed.

A study carried out in major cities around the world (Goldenbeld 2017) found that while drivers generally do not cross intersections under the red light (a few cases for every 1000 vehicles), the same cannot be said for vulnerable road users. Depending on the precise location and time of day, **more than 50% of vulnerable road users** cross intersections under the red light every day. As an example, up to 64% of cyclists cross intersections under a red light in Asia and 20% in Europe.

Bercman's Smart Intersection Control is almost entirely based on the Smart Pedestrian Crosswalk hardware and software and optimises traffic lights to keep the traffic flow as seamless, efficient and safe as possible. This result is achieved by analysing camera images to detect pedestrians' crossing intent and waiting and by transmitting this information to the traffic light controller. Using this system, pedestrians do not have to touch any buttons – their intention to

move and their arrival inside the waiting area is automatically detected by software. This allows the pedestrian to be given a green light without any input from the pedestrian. As an example, let us consider a situation where no pedestrians want to cross at the crossing throughout the day. This means the pedestrian traffic lights will not turn green and the flow of vehicles will not have to stop all day.

## Custom product development solutions

As a result of acquiring Krakul at the end of 2021, Bercman's development team was joined by the engineering team of Estonia's leading developer of IoT and autonomous systems, who work on full product development solutions on a daily basis, from mapping client concepts to prototype development and production. Thanks to the supply chain functions gained through the acquisition of Krakul, Bercman now has the commercial capability to offer personalised product development service to clients based on their specific needs.

The long-term experience and expertise of Krakul's team enables the Issuer to deliver its vision efficiently and purposefully. With top tier engineering expertise in the team, the company will work to be the partner of choice in the market of intelligent transport systems for the development of smart city solutions and other innovative mobility products.

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[Nak Moon Sung, Mauricio Rios, Road crashes have more impact on poverty than you probably thought, 2015.](#)

[Charles Goldenbeld, Traffic rule violations-Red Light Running Driving/riding through an intersection or crossing the road when the light is on red. \(2017\)](#)



### Operail's custom solution case study

The best example of a custom hardware and software development solution is a product developed for AS Operail, an international railway logistics company operating in Estonia, who needed the product to meet the requirements of the European Train Control System. In-house testing of the product prototype started at the end of 2021. Testing on trains will start in spring 2022. Product development compliant with the standards of the European Union (ERTMS) is a long-term opportunity to contribute to the safety of the railway sector, which in turn supports the company's mission and vision.



### 3.2.4 Key milestones in Bercman's timeline

#### 2016

- Founder Mart Suurkask sees that road safety has stagnated and progress slowed down. The concept of the Smart Pedestrian Crosswalk is born.
- Bercman Technologies AS is established on 17 October 2016.

#### 2017

- The company carries out a technical feasibility study for a smart crossing solution. The study includes building a physical prototype and testing it in TalTech's lab.
- A patent application is filed to protect the Smart Pedestrian Crosswalk design solution. Pursuing the application is suspended because it becomes clear that the device needs to be made more modular.

#### 2018

- The company is joined by two developers with hardware background tasked with the development of the first experimental Smart Pedestrian Crosswalk prototype.
- The idea of a Smart Mobility Hub is born.

#### 2019

- Bercman participates in Buildit's business accelerator, which aims to bring the company's Smart Pedestrian Crosswalk solution closer to the market. Bercman completes the accelerator and the BuildIT Pre-Seed Fund makes an investment in the company (€50,000).
- Bercman receives funding from Archimedes' support measure NUTIKAS ("Support for applied research in smart specialisation growth areas") (€70,514) to explore the possibilities of combining sensors with a real-time dataset. The project ends in the first quarter of 2020.

- Non-stop efforts to lower the cost price of the solution and further develop the technology. A more powerful and cheaper Smart Pedestrian Crosswalk prototype is born.
- Installation of Smart Pedestrian Crosswalk prototypes with limited functionality for piloting clients in Estonia and Finland.

#### 2020

- Submitting a project proposal for the Horizon 2020 research programme. The application is successful and Bercman is awarded €50,000 for an economic feasibility study of the Smart Pedestrian Crosswalk. Bercman's intellectual property strategy is also drawn up as part of the analysis.
- Four new employees join the team, covering the areas of hardware development, business development and company management. The team now has eight members.
- Development of the Smart Mobility Hub prototype.
- Bercman starts collaboration with the University of Hamburg and technology companies in Hamburg (including Artificial Intelligence Center of Hamburg) and plans joint projects.
- A pilot project on the Smart Mobility Hub is carried out in Tallinn and Greece in collaboration with the future mobility company Modern Mobility OÜ.
- Start of collaboration with the laboratory for self-driving vehicles of the University of Tartu and Bolt to develop communication between self-driving vehicles and the infrastructure.
- A Smart Pedestrian Crosswalk optimised as a result of further development is assembled and delivered to the first clients in Estonia and the UK.





### 3.2.5 Previous fundraising

During the last 12 months from the date of publication of the Offer, the Issuer has not carried out any fundraisings, with the exception of the IPO of the Issuer's Shares, which was carried out between 14 June to 22 June 2021, during which the Issuer publicly offered 240,000 Shares and raised a total of €816,000 in equity from investors. Persons related to the Issuer have not organised any other fundraising projects in the past year.

Bercman has used the funds raised with the IPO for (a) investments in the optimisation of its Smart Pedestrian Crosswalk product, i.e. the expansion of the engineering and software team to increase vertical integration; (b) expanding the sales team and increasing export activities through international distributors; (c) investments in a product development project – a product compliant with the requirements for train control systems; (d) investments in product development related to communication with infrastructure vehicles (V2X).

### 3.2.6 Options programme

On 21 May 2021, Bercman's General Meeting of Shareholders resolved to approve Bercman's options programme for executives and key employees, subject to the following conditions:

- scope of the options programme: 67,993 Shares;
- maturity period of the options programme: three years from entry into contracts;
- options' exercise price: 10 cents per Share;
- the principles for determining persons due to receive options: key employees who work for the company full time, part-time employees who provide high added value for the company.

Bercman has entered into options contracts. Prior to the adoption of the options plan, Bercman entered into an options contract for

4440 Shares which will become exercisable in 2023. After adopting the options programme, Bercman has entered into options contracts for a total of 42,550 Shares, which will become exercisable within three years after entry into the contract or where an employee leaves the company before that time under certain conditions. Therefore, the shareholding in Bercman of existing shareholders, including investors in the Offer Shares, may be diluted accordingly in the future.

## 3.3 Business environment and plans for the future

### 3.3.1 Markets and competition

The global market worth of international transport systems in 2021 amounted to €37 billion. This fast-growing market is expected to reach €60 billion by 2026 and has an estimated annual compound growth rate of more than 10%. Bercman is active in the largest market segment, i.e. advanced traffic management systems, which represents 38% of the total market.

In geographical terms, the three largest markets are North America (40.2%), Asia-Pacific (24.1%) and Europe (22.4%). Whereas, Europe's share is expected to grow since the European Union has set the target to become the world's leading producer and user of intelligent transport systems.

The main growth factors driving the market in Europe include:

- Growing number of motor vehicles. There are 300+ million vehicles in Europe and this number is growing by 1.4% every year.
- Infrastructure solutions with insufficient safety. On average, 20,000 people are killed on Europe's roads every year and ca. 8000 of the victims are vulnerable road users.
- The desire to reduce negative impacts



- on the environment. Intelligent transport systems have the potential to reduce location-specific greenhouse gases by ca. 4%.
- The largest client group for intelligent transport systems is the public sector, more specifically city governments, who appreciate that these technologies can make transport more efficient. When choosing intelligent transport systems, clients are particularly interested in their (1) ability to collect traffic environment data, (2) low operating costs and (3) long lifetime.

Bercman considers the Baltic States and Western and Central European countries with road safety problems or above average adoption rates of new road safety technologies as key target markets for its products and services. Today, the company has entered six markets in Estonia, Lithuania, Croatia, the United Kingdom, Greece and Switzerland. Negotiations are under way with potential partners to enter new markets in Western and Central Europe (incl. in Finland, Bosnia and Herzegovina, Slovakia, Spain, Portugal, the Czech Republic and Belgium).

Bercman's product solutions are primarily aimed at cities with 50,000+ residents, where local authorities have a strong desire to upgrade urban infrastructure solutions in the coming years. Europe has ca. 250 cities that match this criterion. Based on Bercman's assessment, there are approximately 60 unregulated crossings per 50,000 residents in each city, which means that Bercman's serviceable addressable market for the Smart Pedestrian Crosswalk solution in the target countries exceeds €450 million.

To reach its clients, Bercman looks for potential distribution partners in target markets, negotiates on terms and conditions and selects the most suitable candidates. Generally, Bercman enters into a comprehensive agreement with the distributor, defining the obligations of both

parties, so that Bercman and the chosen partner can serve clients as efficiently as possible and maintain good brand reputation in the public sector. Bercman engages in direct selling only in Estonia.

Solutions for the intelligent transport systems market are primarily offered by international manufacturers of traffic management systems such as Denso (JP), Kapsch TrafficCom (AT), Swarco (AT), Siemens (DE), Thales (FR) and others. From a global perspective, the international transport systems market is split fairly equally between these manufacturers, but Kapsch TrafficCom is the largest manufacturer in the market segment for advanced traffic management systems.

Kapsch TrafficCom operates in 25 countries and its sales turnover in 2020 was more than €505 million, 53% of which originated from Europe. In Kapsch's assessment, those who can significantly differentiate themselves from competitors and offer data-driven solutions will emerge as the winners in the market for advanced traffic management systems over the next seven years.

To the best of Bercman's knowledge, its competitors have not informed the public of any plans to launch product solutions similar to the Smart Pedestrian Crosswalk in the coming years. This was also confirmed by queries made on competitors in European patent databases. Given that this is an emerging field and potential patent applications may be recent, the existence of a so-called 'dark period' cannot be excluded. The dark period refers to the period from the priority date until the publication of the patent application, when applications are not visible in the databases.

The Smart Pedestrian Crosswalk offers unprecedented functionality compared to competing solutions (incl. automatic warning systems installed at crossings) at a comparable price.

The biggest technological advantage of Bercman's solution is its machine vision algorithms, which are the only ones to enable local situational conflict prevention.

### 3.3.2 Bercman's growth strategy

Connected and autonomous vehicles will have a critical role in improving the safety and efficiency of mobility and the traffic environment in the future. Today, the majority of the traffic environment is still not connected. Consequently, Bercman's products focus on the improvement of the current non-connected traffic environment. At the same time, we are building readiness on the part of connected infrastructure to interact with connected and autonomous vehicles.

In Bercman's assessment, vehicles are set to undergo a phased transition where connected vehicles will be adopted next to non-connected vehicles, and self-driving vehicles will gradually be allowed on public roads around the world. An example of this is the Roads and Transport Authority of Dubai, which signed an agreement with Cruise self-driving buses to launch a robot taxi service in Dubai in 2023. Safety is paramount in the transition from non-connected to autonomous vehicles. However, the current market situation is showing no signs that human-driven vehicles are disappearing from traffic.

Connected infrastructure has an increasingly prevalent role to play in such an environment and Bercman's growth strategy is based on two objectives:

- address the security and efficiency-related challenges in the transport industry;
- cut switching cost for the client.

In terms of **safety**, Bercman's current focus is primarily on providing a safe route for pedestrians, supported by the Smart Pedestrian Crosswalk.

In terms of **efficiency**, Bercman is focused on solutions for connected and autonomous vehicles. Bercman's on-demand public transport solution and V2X communication projects promote this aim.

In terms of **switching cost for the client**, Bercman is focused on reducing the cost price of its products and increasing modularity.

### Go-to-Market strategy

Bercman's go-to-market approach takes into account that turnover is layered. As of now, the main layer is the network of distributors, but Bercman plans to introduce additional layers:

- add new products/services/features to increase prices and create additional sales and cross-selling opportunities;
- target new client profiles;
- create strategic partnerships that open up new segments;
- bring in additional go-to-market teams;
- develop a recurring revenue business model.

### Network of distributors

Bercman is currently focusing on building up a network of distributors in Europe. For its distributors, Bercman has defined as its ideal client profile (ICP) a local government with at least 50,000 residents that have already prepared a project for planning a smart city or a design document. Specifically, the client profile relates to the transport and urban planning authorities of these local governments. However, based on the experience we have already accumulated, the ideal end-client profile cannot be perceived as exclusive and limiting, and existing end-clients range from national capitals to smaller cities.

Bercman follows the principle of distribution in selling its products. Each export market has 1 to 4 distribution partners, depending on



varying market characteristics. The partner's role in the local market is to manage sales activities (approach end-clients, i.e. cities, participate in tenders) and carry out installation and maintenance activities. To enter the market in a specific country, Bercman usually starts by carrying out a pilot project in collaboration with the distributor to raise awareness in the market and demonstrate the value of the solution to end-clients. On average, it takes 6-12 months to build a profitable partnership with a new partner and complete a pilot project.

Bercman primarily finds distribution partners using three methods:

- Industry events – Bercman's sales and business development team attends industry events (conferences, trade fairs) to network and build partnerships. Consistent participation in industry events builds trust among companies operating in the industry and improves the prospects of further collaboration. Bercman's products, in particular the Smart Pedestrian Crosswalk, stand out at industry events and are easy to remember. As a result, potential partners look us up when visiting trade fairs and contact Bercman to inquire about the possibility of collaboration.
- Industry associations – Bercman constantly keeps tabs on the latest news and activities in the field of intelligent transport systems and smart cities. A good way to stay active in this field is to be a member of various industry associations. As a member of ITS Estonia, Bercman belongs to the local association and thus receives information on all new ITS projects in Estonia. Membership

in ITS Estonia also gives Bercman the opportunity to have a say in the association's activities and influence the possible direction of its future export activities. Furthermore, membership is an excellent opportunity to establish and share contacts for building new partnerships in the field of intelligent transport systems.

- Direct approach – Bercman's sales team also uses direct approach to reach potential new partners. Potential B2B partners with the right profile are identified in European markets and proactively approached to explore potential collaboration. Bercman's Smart Pedestrian Crosswalk stands out sufficiently from competing products and the sales team has devised an efficient methodology to attract the interest of potential partners.

### Recurring revenue

In creating a recurring revenue business model, Bercman is focused on solutions that can create a recurring and measurable impact for the client. Presently, one of the most obvious solutions in this regard is related to Bercman's Smart Pedestrian Crosswalk. Bercman currently incurs a one-off sale (mainly hardware costs) and then receives an annual maintenance fee. The modular nature and mobile connectivity of the Smart Pedestrian Crosswalk allows existing installations to be upgraded with new features and software capabilities, such as average speed measurement, detection of dangerous situations, etc. Bercman has already entered into its first contract with recurring revenue.

### 3.3.3 Development priorities

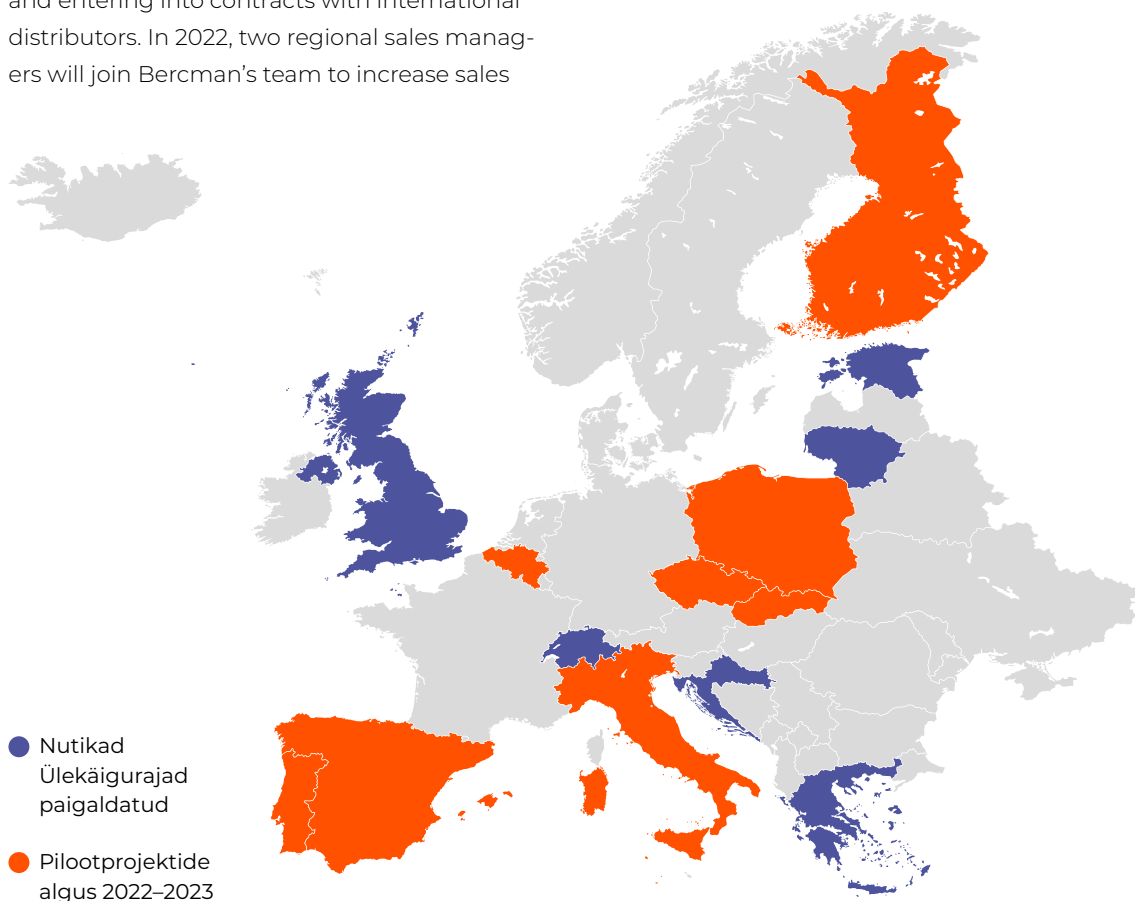
#### Expansion to foreign markets

Today, Bercman has entered six markets in Estonia, Lithuania, Croatia, the United Kingdom, Greece and Switzerland. In the near future, local domestic expansion will take place in Croatia, Greece and the UK in addition to Estonia. Finland, Spain, Slovakia, Bosnia and Herzegovina, Portugal, the Czech Republic, Poland, Scotland, Italy and Belgium will be added as new markets between 2022 and 2023. If these markets were to be realised in full, Bercman would have a total of 23 distribution partners in 16 European countries.

To boost its sales activity and expand into new markets, Bercman has increased its sales and business development team, tasked with finding markets for Bercman's own products and entering into contracts with international distributors. In 2022, two regional sales managers will join Bercman's team to increase sales

capacity and improve the speed and efficiency with which the company reaches new markets. The acquisition of Krakul brought additional target markets for the Issuer at group level, which both group companies can access more easily using existing contacts.

Even though Bercman's export strategy is currently focused first and foremost on European markets, the company is in talks with the United Arab Emirates as it first non-European market for the piloting and sale of smart street infrastructure solutions to Dubai. At the time of publication of this document, negotiations are under way with the local transport authority and the largest telecommunications company. Given the region's investment in infrastructure (including traffic control) and their planned introduction of robot taxis on the roads, Bercman considers the UAE a very attractive market outside Europe.





### Membership of international organisation CCAM – Connected, Cooperative and Automated Mobility

Bercman joined CCAM, an international organisation for intelligent and self-driving transport systems, at the end of 2021. CCAM is a non-profit association established in June 2021 under the European Commission's Horizon Europe programme. The association deals with intelligent and self-driving transport systems and aims to accelerate the development and deployment of new technologies that enable green, sustainable and smart mobility. In addition, CCAM wants to make Europe the world leader in the development and deployment of intelligent and self-driving transport system solutions over the next decade. The non-profit association is made up of stakeholders from different sectors, such as industry, research institutions, national and local governments and other organisations.

Bercman's goal for 2022 is to develop new product solutions, in particular the application of Smart Pedestrian Crosswalks machine vision algorithms in products designed to manage traffic and improve road safety at intersections and other complex junctions. The technology will be implemented in the Smart Intersection Control and in the planned Automatic Giving Way Detection product, which are largely software solutions.

### TAVF test track

In 2022, Bercman will take part in a development project in the **TAVF** testing campus for autonomous vehicles in Hamburg. A multi-kilometre test track for automated and connected vehicles has been built in the city of Hamburg, and since 2018 it has been upgraded with vehicle-to-infrastructure and vice versa communication capabilities. Thanks to numerous device functions, the test track allows vehicle manufacturers, technology companies and research institutions test intelligent transport systems, safety and assistance systems, and the functions of automated and connected vehicles on public roads in real traffic environments.

Bercman will supply a device for the test track to establish the preconditions necessary for the test track crossing to be able to alert connected vehicles of vulnerable road users.

### Project SmartWalk

Bercman is taking part in a joint project, financed by the German Federal Ministry of Transport and Digital Infrastructure, together with NATIX GmbH, the University of Hamburg (Hamburger Informatik Technologie Center e.V) and ARIC (Artificial Intelligence Center of Hamburg). SmartWalk aims to develop intelligent traffic infrastructure while protecting vulnerable road users such as cyclists and pedestrians. As part of the project, a smart traffic sign designed for the pedestrian crossing is equipped with an intelligent camera system that protects data and uses innovative AI technologies. SmartWalk detects critical traffic situations and alerts road users by combining anonymised data and sensors in real-time. Pilot tests will be carried out in Hamburg and Tallinn in 2022. As part of the project, Bercman is developing a smart traffic sign that detects road users. Intelligent transport infrastructure will be developed together with the organisations in the consortium.





Photo: Tartu Ülikool

### Contributing to development of self-driving vehicles

New technological advancements in the world of self-driving vehicles look to have the same impact as the emergence of the first vehicles alongside horse-drawn carriages. Many automotive historians compare the situation today with the end of the 19th century, when the first motor vehicles were invented. Some of them predict a ban on non-autonomous vehicles in 20 years' time. The reason for the realisation of this prospect lies in connected vehicles: interconnecting all vehicles significantly reduces the likelihood of accidents as it eliminates the cause for 90% of accidents – human error. In line with its mission, Bercman wants to help make self-driving vehicles controlled by infrastructure more prevalent by providing smart solutions that can communicate with vehicles and provide them with a static view of the infrastructure for safety. In collaboration with the laboratory for self-driving vehicles of

the University of Tartu, which is developing a self-driving vehicle for Bolt, Bercman installed a sensor at a roundabout at the end of 2020 that detects the presence of vehicles at the roundabout and communicates this information to the self-driving vehicle. Bercman's sensor and communication between the infrastructure and the vehicle helped make it safer for the self-driving vehicle to enter the roundabout, thus ensuring a smoother traffic flow.

### Collaborative project to test technological solution for on-demand transport service with self-driving vehicles

Bercman's collaboration with the University of Tartu will continue in 2022. From February to April, Bercman will take part in a project coordinated by the laboratory for self-driving vehicles of the University of Tartu together with Tarty City Transport, Traffest OÜ and Modern Mobility OÜ.

The goal of the collaborative project is to test the use of self-driving vehicles in the provision of on-demand transport services and to validate the necessary technological solutions and processes. As part of the collaborative project, Bercman will install radars on the movement trajectory of the self-driving vehicle in the city of Tartu and on highways outside the city, and interface them with the self-driving car's control system. Information from the radar is forwarded to the self-driving vehicle via V2X (vehicle-to-infrastructure) systems, letting the machine know whether it is safe for the vehicle to turn onto the road. Bercman will also be interfacing the vehicle control system with Estonia's first smart pedestrian crossing equipped with 5G connectivity on Kroonuaia Street in Tartu. When the self-driving vehicles is in the immediate vicinity of the crossing, the crossing will let the self-driving vehicle know whether there is a pedestrian waiting to cross the road or whether the vehicle can continue without stopping.

Due to the pilot projects taking place in 2022, Bercman will continue to build competence and knowledge to set up the ability to communicate with self-driving vehicles and to find solutions for complex traffic junctions. While the timeframe for the widespread adoption of self-driving vehicles remains an estimation, ongoing developments suggest that connectivity between cars and infrastructure will become more common within the next five years.

### **New functions for Smart Pedestrian Crosswalks**

New functionalities are being added to Bercman's Smart Pedestrian Crosswalks to meet the evolving needs for smarter urban infrastructure. As part of the natural evolution of crossings and the experience acquired by the team, further possibilities for using crossing intelligence to improve road safety are being

developed together with clients. In addition, Bercman plans to use the machine vision algorithms already developed for and put to use in the Smart Pedestrian Crosswalk so as to prevent dangerous traffic situations in its future products.

### **Smart road solution able to measure average speed**

One of the most important intelligent transport system solutions for road safety in this century includes camera-based speed monitoring systems, of which average speed measurement systems are considered to be the most effective.

Bercman won the Põlva Smart Road tender (€176,000 including VAT) and by the end of October 2022, Põlva will be home to the world's only smart road with 14 Smart Pedestrian Crosswalks and Estonia's first average speed measurement pilot. To construct the smart road, Smart Pedestrian Crosswalk solutions with additional functionality for measuring average speed will be installed at the crossings on the road section. They will act as smart information collectors, whereas the crossing solutions can be fitted with number recognition cameras necessary for measuring the average speed to the crossing solutions, eliminating the need to install separate measuring points. To deliver the information, panels using the mobile telephony network and displaying variable information will be installed at the start and end points of the smart road. The smart road will use the panels with variable information to influence traffic behaviour through positive or negative feedback. Using speed data collected in the earlier section of the smart road, a positive or negative message is displayed to the driver in the later part of the road, together with the average speed of the vehicle.





The smart road software consists of two main parts – (1) the software needed to run the system, and (2) the software needed to manage the system. In the first case, the purpose of the software is to ensure the interoperability of the intelligent transport systems to be installed. In the second case, the software is a web application where collected data are transferred to then be displayed graphically in the management portal for convenient analysis.

After the completion of the above project, the developed smart road solution will be added to Bercman's product portfolio as a stand-alone comprehensive solution. The solution can be implemented as a shorter or longer road section of a similar smart road in other locations in Estonia and abroad.

### **Automatic Giving Way Detection**

As an additional functionality, an Automatic Giving Way Detn solution is in development for the future. The software solution uses machine vision to detect whether vehicles allow pedestrians cross the road on a crossing. The practical value of this new functionality lies in the collection of baseline information on incorrect behaviour in traffic, which can be used, if regulated, to impose a fine on the vehicle owner.

### 3.3.4 Financial forecasts

Bercman Group sales forecast 2022-2024 (€)	2022	2023	2024
<b>Revenue</b>	<b>2 442 000</b>	<b>4 051 000</b>	<b>6 532 000</b>
Work performed by entity and capitalised	266 000	233 000	145 000
Raw materials and consumables used	-943 000	-1 614 000	-2 528 000
Other operating expense	-466 000	-546 000	-657 000
Employee expense*:	-1 543 000	-1 838 000	-2 162 000
Incl. option expense	-64 000	-75 000	-64 000
Other expense	-2 000	-3 000	-4 000
<b>EBITDA</b>	<b>-246 000</b>	<b>283 000</b>	<b>1 326 000</b>
Depreciation and amortisation	-138 000	-194 000	-231 000
<b>Profit</b>	<b>-384 000</b>	<b>89 000</b>	<b>1 059 000</b>
Financial income and expenses	-6 000	-5 000	-3 000
<b>Annual period profit</b>	<b>-390 000</b>	<b>84 000</b>	<b>1 092 000</b>

\* Bercman's key employees are covered by an share option scheme. The fair value of the options at the grant date is expensed over the vesting period of the options. An increase of the same amount is added to the equity item "Other reserves". The cost of options is estimated and does not result in a cash outflow.



In 2021, Bercman was focused on the development of a B2B sales strategy for foreign markets and aimed to draw on that strategy to launch as many pilot projects as possible in the defined target markets. The focus for 2022 and 2023 will be on actively increasing foreign market sales volumes and expanding into new countries. The sales forecast for Smart Pedestrian Crosswalks for this year is several times higher than last year. In addition to Smart Pedestrian Crosswalks, the Issuer's sales turnover will be further boosted by participation in innovation tenders and the development of custom solutions for new or existing clients.

Finland, Spain, Slovakia, Bosnia and Herzegovina, Portugal, the Czech Republic, Poland, Scotland, Italy and Belgium will be added as new markets this year with communication channels opened with several other European markets.

In 2024, Bercman plans to further increase sales by entering new countries and finding new collaboration and strategic partners. Work will continue on Smart Pedestrian Crosswalk software developments and experimental developments on other products to carry out the company's mission. There will be an increased focus on the marketing and licence-based distribution of software products and services.

Krakul plans to increase both turnover and profit in the financial year of 2022 by working on long-term client projects and executing new projects in Estonia and export markets. To ensure growth, the company is expanding its capacity to serve client in specific areas, including micromobility and smart cities.

This year and in the future, Bercman, together with Krakul's experienced engineering team, will be able to bring to its clients not just products, but also a more robust product development service, including one-off developments, custom solutions and semi-custom solutions where there is a need to integrate equipment with existing systems or add additional capabilities.

### **3.4 Bercman's equity and holdings in other companies**

At the date of the company's description, Bercman's share capital amounts to €129,847.10. Bercman has issued 1,298,471 Shares of a single class with a nominal value of 10 cents each. In addition to the nominal value of the share capital, Bercman has an equity premium and an option reserve totalling €1,109,110 as well as retained profit/loss. Bercman, together with its subsidiary Krakul, forms a consolidation group. Bercman has a 100% holding in Krakul, i.e. a share with a nominal value of €2500.

### 3.5 Bercman's key economic performance indicators

Bercman's subsidiary is Krakul OÜ, Bercman and Krakul OÜ form a consolidation group. Considering that Krakul OÜ was acquired at the end of last year, Bercman's unconsolidated financial data are presented below for comparability and clarity.

Bercman's balance	2019	2020	2021
<b>ASSETS</b>			
Cash and cash equivalents	8 743	9 727	312 928
Receivables and prepayments	12 151	11 313	53 017
Inventories	105 633	68 884	92 929
<b>Total current assets</b>	<b>126 527</b>	<b>89 924</b>	<b>458 874</b>
<b>NON-CURRENT ASSETS</b>			
Investments in subsidiaries and associates	0	0	1 233 600
Property, plant and equipment	40 151	32 161	12 536
Receivables and prepayments	37 566	0	0
Intangible assets	93 301	103 164	228 839
<b>Total non-current assets</b>	<b>171 018</b>	<b>135 325</b>	<b>1 474 975</b>
<b>TOTAL ASSETS</b>	<b>297 545</b>	<b>225 249</b>	<b>1 933 849</b>
<b>LIABILITIES AND EQUITY</b>			
<b>CURRENT LIABILITIES</b>			
Loan liabilities	103 706	59 307	28 472
Payables and prepayments	163 357	197 358	251 568
Provisions	4 168	4 168	4 168
<b>Total current liabilities</b>	<b>271 231</b>	<b>260 833</b>	<b>284 208</b>

Bercman's balance	2019	2020	2021
<b>Non-current liabilities</b>			
Loan liabilities	96 048	0	4 822
Government grants	23 310	23 310	0
<b>Total non-current liabilities</b>	<b>119 358</b>	<b>23 310</b>	<b>4 822</b>
<b>TOTAL LIABILITIES</b>	<b>390 589</b>	<b>284 143</b>	<b>289 030</b>
<b>EQUITY</b>			
Issued capital	75 000	75 000	129 847
Share premium	0	0	1 868 788
Other reserves	0	0	473 922
Unregistered equity	0	100 592	0
Retained earnings (loss)	-47 324	-150 358	-234 486
Annual period profit (loss)	-120 720	-84 128	-593 252
<b>Total equity</b>	<b>-93 044</b>	<b>-58 894</b>	<b>1 644 819</b>
<b>TOTAL LIABILITIES AND EQUITY</b>	<b>297 545</b>	<b>225 249</b>	<b>1 933 849</b>

Bercman's Income Statement	2019	2020	2021 projection	2021 actual
Revenue	70 359	124 731	309 921	76 096
Other income	35 548	89 018	42 928	51 150
Work performed by entity and capitalised	0	0	0	130 178
Raw materials and consumables used	-48 241	-72 597	-155 551	-146 345
Other operating expense	-79 998	-33 460	-81 316	-231 571
Employee expense	-61 104	-123 086	-161 289	-384 855
Depreciation and amortisation	-27 286	-41 626	-40 533	-75 938
Other expense	-824	-11 413	-7 942	-1 796
<b>Total operating profit (loss)</b>	<b>-111 546</b>	<b>-68 433</b>	<b>-93 783</b>	<b>-583 081</b>
Interest income	1	0	0	0
Interest expenses	- 6 100	- 13 737	0	-8 870
Other financial income and expense	-3 075	-1 958	-3 596	-1 301
Profit (loss) before tax	-120 720	-84 128	0	-593 252
Income tax	0	0	0	0
<b>Annual period profit (loss)</b>	<b>-120 720</b>	<b>-84 128</b>	<b>-97 379</b>	<b>-593 252</b>

The Issuer's audited accounts for the last three financial years are set out in Annex 2.

### 3.6 Key contracts and agreements

On 4 October 2018, Bercman entered into an investment loan contract with Swedbank AS. The principal balance of the investment loan granted by the bank was 17 481,04 euros as at 30 March 2022. The loan is due to be repaid by 15 September 2022. The loan contract was entered into on market conditions and both parties perform the contract in accordance with its terms and conditions.

Bercman's core shareholders have entered into a shareholders' agreement to agree on the collaboration of parties as shareholders of the Issuer. Regardless of the above, the shareholders' agreement does not include any voting arrangements and the resolutions of the Issuer's general meeting are adopted in accordance with the Articles of Association and the law. The most important condition in the shareholders' agreement is the arrangement whereby Hasenberg OÜ, the Issuer's key shareholder and a company controlled by the Issuer's founder and Management Board member, undertakes not to transfer its Shares for a period of 12 months from the date of the agreement. The restriction expires in the third quarter of 2022. The agreement does not contain any covenant or condition that might harm the rights of a shareholder who is not a party to the agreement.

Bercman Technologies AS, Krakul Holding OÜ and Krakul OÜ entered into a securities swap on 22 November 2021, agreeing on the terms and conditions of the exchange of ownership of Krakul OÜ. Under the swap agreement, Krakul Holding OÜ acquired 100,000 Bercman shares with a nominal value of €0.1 each, and terms and conditions were agreed under which Krakul Holding OÜ can earn up to 60,000 additional Bercman shares. To meet these terms and conditions, both Bercman and Krakul OÜ must meet their annual sales

and profit targets. The transaction and swap were approved by the special general meeting of Bercman's shareholders on 1 December 2021 and the outcome was announced on the same day via stock market news.

### 3.7 Material assets

Due to the field in which Bercman operates, its material assets are first and foremost its intellectual property and the equipment, fittings, inventories and stocks of finished products needed to prototype Bercman's products. Keeping in mind the sales targets set for this year, Bercman has, over the past year, increased its hardware stock for the production of Smart Pedestrian Crosswalk modules in the company.

#### 3.7.1 Intellectual property strategy

Bercman protects its intellectual property (IP) against unauthorised use. As part of a project under the Horizon 2020 programme, the company carried out a feasibility study, which also defined the company's IP strategy moving forward. Bercman's IP strategy relies heavily on trade secrets, but the company is also increasingly interested in patenting its technology in Europe and the Americas (see the following subsection on Intellectual property).

In June 2021, Bercman filed patent application EP21179635.4 to protect the company's vision of improving safety at crossings. More specifically, the subject matter of this patent application is a system and method for minimising accidents involving vulnerable road users in traffic by predicting the trajectories of road users. Information on this is available on the company's website [www.bercman.com](http://www.bercman.com) under the tab Investor Relations. The company has also appointed a person responsible for managing Bercman's intellectual property (incl. responsibility for ensuring that the source code

remains the property of the company), conducting periodic searches on the freedom of action and keeping up-to-date with competitors' intellectual property.

### 3.7.2 Intellectual property

Bercman's intellectual property is represented by German patent law firm Stellbrink & Partner Patentanwälte mbB. The company's patent attorney is Axel Stellbrink, who has nearly 30 years of experience in patenting start-up inventions. Axel is Bercman's first point of contact for evaluating new patent ideas as well as carrying out research on the freedom of action.

### 3.7.3 Trademark

The European Union Intellectual Property Office has entered the word combination 'Bercman' in the European Union trademarks register for the relevant classes. Registration certificate number 016235418. Should the scope of activities expand, the list of the classification of goods and services will be extended to protect the word combination.

## 3.8 Proceedings

Bercman Group is currently not involved in any ongoing, and has not in previous reporting periods been involved in any court proceedings, tax or other disputes. No bankruptcy petitions have been filed against and no bankruptcy proceedings initiated with regard to any member of the Bercman Group.



## 4 TEAM, OWNERS, CONSULTANTS

### 4.1 Managing bodies

Bercman uses a two-tier management structure. The Management Board is responsible for the day-to-day operations and management of Bercman, and has the right to represent Bercman under the law and the Articles of Association. Bercman's Management Board has two members.

Bercman's Supervisory Board is responsible for the strategic planning of the company's business and oversees the activities of the Management Board. Bercman's Supervisory Board has three members.

Bercman's highest managing body is the general meeting of shareholders. Shareholders can participate in the management of Bercman through a general meeting of shareholders, which is competent to decide on certain important corporative issues, such as: amend the Articles of Association; increase and reduce share capital; issue convertible bonds; elect and remove members of the Supervisory Board; elect an auditor; designate a special audit; approve the annual report and distribute profit; decide on dissolution, merger, division or transformation of Bercman; decide on conclusion and terms and conditions of transactions with the members of the Supervisory Board, decide on the conduct of legal disputes with the members of the Management Board or Supervisory Board, and appointment of the representative of Bercman

in such transactions and disputes; decide on other matters prescribed by law or Bercman's Articles of Association.

### 4.2 Management Board

As of the date of the company's description, Bercman has a two-member Management Board consisting of Mart Suurkask and Jaan Hendrik Murumets.



**Mart Suurkask** was born in 1989. He graduated from the Estonian Entrepreneurship University of Applied Sciences in 2011 with a degree in Business

Administration and a specialisation in logistics. Through holding company Hasenberg OÜ, Mart Suurkask owns approximately 29.93% of Bercman's Shares. Mart has been an entrepreneur for almost 9 years now and during this time he has accumulated various knowledge and skills to successfully open up an international dimension for his company. Mart is Bercman's co-founder and a visionary who is fully committed to the development and success of the company. In addition to acting as Bercman's Management Board member, Mart is also on the Management Boards of MTÜ Tartu Koortepargid, Hasenberg OÜ and Elastotek OÜ.



**Jaan Hendrik Murumets** was born in 1991. He graduated from Tallinn University of Technology in 2017 on Electronics and Telecommunications.

Jaan is on the Management Boards of Bercman as well as Krakul. Jaan joined Krakul in 2013 and has worked in the company as an electronics engineer, programmer and project manager, holding the position of CEO since 2017. Jaan is a member of the council of the Estonian Electronics Industries Association and advises start-ups through various mentoring programmes such as the ESA Business Incubator Estonia, Tehnopol's Startup Incubator, the Buildit Accelerator, etc. In 2020, Jaan won the title of Estonia's Young Entrepreneur of the Year. Jaan's company Krakul Holding OÜ, in which Jaan has a holding of one third, owns approximately 7.7% of Bercman's shares. In addition to being on the Management Board of Bercman, Jaan Hendrik is also a Management Board member in VictorKilo-Tango OÜ, Krakul OÜ, Krakul Investments OÜ, Krakul Holding OÜ and Edgeway OÜ.

### 4.3 Supervisory Board

As of the date of the company's description, Bercman's Supervisory Board consists of three members: Kuldar Leis, Raimond Russak, and Tarvi Thomberg.



**Kuldar Leis**, born in 1968, is **Chairman of the Supervisory Board**. He graduated from the School of Economics of the University of Tartu. Kuldar has been

Bercman's shareholder and its Supervisory Board member since 2018. He has over 25 years of experience in entrepreneurship and managing companies. He has been involved in the listing of two other companies in addition to

Bercman: as Chairman of the Management Board, Kuldar helped list Premia Foods (AS PRFoods) on the main list of Nasdaq Tallinn, and as a member of the company's Supervisory Board, he helped Linda Nektar on First North. He remains a Supervisory Board member in both listed companies, and is also on the Management Boards of Tartu 2024 Foundation (Sihtasutus Tartu 2024), Põlva Tennis Club, Põlva Handball Club, OÜ Solarhouse, OÜ RODODENDRON, and on the Supervisory Boards of Saaremere Kala AS and Toidu- ja Fermentatsioonitehnoloogia Arenduskeskus AS. As the Management Board member of the Tartu 2024 Foundation Kuldar's day-to-day work involves preparations for 2024 when Tartu will be the European Capital of Culture. Through his holding company OÜ RODO-DENDRON, he owns approximately 12.78% of Bercman's shares.



**Supervisory Board member Raimond Russak** was born in 1970. He graduated from the Estonian University of Life Sciences in 1997 on Economics and

Entrepreneurship. Raimond has worked in more than ten different companies, mostly in finance management, most recently at TV3 as Management Board Member and CFO. He has also co-founded one of the most successful media companies in the Baltics, Kids Network Television OÜ, which was sold to the large corporation MM Grupp. Today, Raimond is building a greener future as the co-founder, Management Board member and CFO of Roofit Solar Energy OÜ. Raimond Russak owns approximately 1.2% of Bercman's shares through the limited liability company Finantsvara OÜ, where he also acts as the Management Board member.



**Supervisory Board member Tarvi Thomberg** was born in 1982. Tarvi has been a member of Bercman's Supervisory Board and an investor since 2020. He

graduated from Tallinn University of Technology in 2007 with an MA in Power Engineering, and from Estonian Business School in 2014 with an MBA. In addition, in 2013 he also furthered his knowledge in Business Management at London Business School. Tarvi has worked as Elektrilevi's Management Board member and Head of Client Management. Today, he is on the Management Board of AS Tallinna Vesi. Tarvi Thomberg owns around 7% of Bercman's shares through the limited liability company Wrap OÜ. In addition to Bercman's Supervisory Board, Tarvi is on the Management Boards of Wrestling Club Juhan, WRAP OÜ, Home Gate OÜ, the ESTONIAN WRESTLING FEDERATION and AKTSIASELTS TALLINNA VESI.

#### 4.4 Management Board statement

To the best of the Management Board's knowledge, no Management Board or Supervisory Board member and no executive of Bercman Group has been punished pursuant to criminal procedure or sentenced for fraud or swindling during the preceding five years. Furthermore, to the best of the Management Board's knowledge, no Management Board or Supervisory Board member, nor any key employee, has been a member of the managing body of any legal person during the previous five years at the time of the initiation of bankruptcy, reorganisation or liquidation proceedings. The Management Board warrants that Bercman Group is currently not involved in any ongoing, and has not in previous reporting periods been involved in any court proceedings, tax or other disputes. No bankruptcy petitions have been filed against Bercman and no bankruptcy proceedings have been initiated. The Management Board warrants that the information

contained in the company's description is, to the best of the management Board's knowledge, true and contains no omissions which might have an impact on the substance of the company's description.

## 4.5 Team

Bercman Group has an ambitious and committed team of 38 people, including 16 people in Bercman and 22 in Krakul. Professionally educated and trained team members have brought the necessary competencies as well as previous industry experience from Estonia and abroad to the group, and each team member is committed to the realisation of Bercman Group's objectives.

Compared to the time of the IPO, Bercman's team has gained six new employees. To move forward with the company, meet the sales targets and realise the vision of the company, reinforcements have been brought in for the engineering department, but the team has

also been joined by a CFO, a marketing and communications manager, a business innovation manager and an additional regional sales manager.

Krakul employs 22 experienced specialists, including top-level electronics, software and product development engineers. Krakul's CEO Jaan Hendrik Murumets doubles as the Chief Technology Officer of Bercman, which provides an opportunity to manage the development and technical competences of the two companies in such a way that Bercman has the potential to become a leading international partner in the market for smart city solutions.

Bercman Group is committed to ensuring that its team members enjoy balanced professional and personal development and that such development also supports the pursuit of the company's objectives. When recruiting new team members, Bercman's priority is to maintain a sense of unity and the company's unique organisational culture even as the company grows.

## 4.6 Shareholders

The following shareholders have a holding of more than 5% in Bercman.

Shareholder	Holding	Beneficiary/beneficiaries
Hasenberg OÜ	29,93%	Mart Suurkask
OÜ RODODENDRON	12,78%	Kuldar Leis
Swedbank AS Clients	8,44%	BuildIT Seed Fund, BuildIT Pre-Seed Fund
Krakul Holding OÜ	7,7%	Jaan Viru, Jaan Hendrik Murumets, Kristjan Tozen
Wrap OÜ	7%	Tarvi Thomberg

## 4.7 Persons involved in organisation of Offering

In addition to Bercman's team, the following persons are involved in the organisation of the issue and Bercman's business. The total amount of the fees payable to them in connection with the organisation of the Offering is included in the costs of organising the Offer (see Chapter 2 for details).

### 4.7.1 Auditor

Bercman's auditor is Number RT OÜ (registration code 10213553). Number RT OÜ is a member of the Estonian Auditors' Association. The annual reports attached to the company description have been audited by Number RT OÜ.

### 4.7.2 Adviser

Bercman's adviser is Ellex Raidla Advokaadibüroo OÜ (registry code 10344152, <https://ellex.legal/>), whose main field of activity is the activities of lawyers and law firms. The adviser's representative, who provides advisory services to the Issuer, is Gerli Kivisoo (e-mail: [gerli.kivisoo@ellex.ee](mailto:gerli.kivisoo@ellex.ee)). Bercman has entered into a contract of indefinite duration with the Adviser.

The Adviser or the representative of the Adviser have no holdings in Bercman's share capital as of the date of the company description.

Nõustajal ega Nõustaja esindajal ei ole käesoleva ettevõtte kirjelduse kuupäeva seisuga osalust Bercman aktsiakapitalis.

## 4.8 Related-party transactions and conflicts of interest

There are no related-party transactions or conflicts of interest.



# 5 TERMS AND CONDITIONS OF OFFERING

## 5.1 Offering

In the course of the Offering, Bercman will issue and offer up to 151 261 Offer Shares. If interest in the Offering is high and the demand of investors exceeds the number of Offer Shares, the Issuer may increase the number of Offer Shares by up to 20%, i.e. to a maximum of 181 513 Offer Shares.

Assuming that all 151 261 Offer Shares are subscribed for by investors during the Offering, the registered share capital of Bercman immediately after the issuing of the new shares will be €144 973,2 and the total number of shares will be 1 449 732. Assuming that all Offer Shares are subscribed for by investors, the Offer Shares will represent 10,4% (or 12,3% if oversubscribed) of Bercman's total share capital.

In order to ensure that investors are able to trade in the Shares as soon as possible after settlement of the Offering, the Shares held by Hasenberg OÜ, a major shareholder of Bercman, will be used to settle the Offering. Hasenberg OÜ will lend a number of Shares equal to the number of Offer Shares to the Issuer, which will use these Shares for settlement purposes. Bercman's Articles of Association include a temporary right of the Supervisory Board to increase Bercman's share capital to a limited extent. On 20 April 2022, Bercman's shareholders adopted the resolution to authorise the Supervisory Board of Bercman to increase the share capital of Bercman. The resolution of the Supervisory Board to issue new Shares to

Hasenberg OÜ in order to return the borrowed Shares will be taken after the settlement of the Offering, once the final number of Offer Shares has been determined. For the sake of clarity, the number of Shares held by Hasenberg OÜ will not change as a result of the use of the Share lending structure (the holding will be diluted in proportion to the size of the Offering – before the Offering, the holding of Hasenberg OÜ's in Bercman is 29.93%, assuming that all Offer Shares are subscribed for by investors and that Hasenberg OÜ does not subscribe for Offer Shares itself, the holding of Hasenberg OÜ in Bercman will be 26,8%(in the case of oversubscription 26,26%). The increase of the share capital will presumably be registered in the Commercial Register on or around 13 May 2022 (the date may change). The shares are freely transferable and are not subject to any restrictions on trading or pledging.

The Offer Shares will give the right to Bercman's dividends (if paid) from the financial year that started on 1 January 2022.

The Offering is not fully guaranteed, and the funds raised from investors are not secured.

In the last 12 months before the publication of the Offering, the Issuer has not raised any capital except for the initial public offering of the Issuer's Shares, which was carried out during the period from 14 June to 22 June 2021, during which the Issuer publicly offered 240,000 shares and raised a total of €816,000 in equity from investors.



which the Issuer publicly offered 240,000 shares and raised a total of €816,000 in equity from investors.

## 5.2 Offered securities

Bercman is offering Bercman Shares with a nominal value of €0.1. All Bercman Shares belong to the same class. Bercman Shares are registered in the Estonian Central Register of Securities maintained by the Estonian branch of Nasdaq CSD SE, and the Offer Shares will also be registered there.

## 5.3 Persons eligible to participate in the Offering

Participation in the Offering will be open to legal entities and natural persons who are based in Estonia and who have opened a securities account through a Nasdaq CSD account operator (bank).

The indicative schedule of the Offering is as follows:

Beginning of Offer Period:	22 April 2022 at 10:00
End of Offer Period:	2 May 2022 at 16:00
Determination and disclosure of the outcomes of the Offering and the distribution of the Offer Shares:	4 May 2022
Offer settlement:	6 May 2022
Increase of share capital in Commercial Register	13 May 2022
First day of trading with new Shares on First North:	17 May 2022

Income tax will be withheld from payments related the Offer Shares in accordance with the legislation of the Republic of Estonia.

## 5.4 Offer price

Offer Shares will be priced at €6,18 per Offer Share, which includes the nominal value of 10 cents and the share premium of €6.08.

## 5.5 Offer Period

The Offer Period is the period during which investors eligible to participate in the Offering may submit a subscription order to subscribe for the Offer Shares. The Offer Period will commence at 10:00 on 22 April 2022 and end at 16:00 on 2 May 2022 (Estonian local time).

## 5.6 Issuance of subscription order

Investors are obliged to ensure that the information contained in their subscription orders is correct, complete, and legible. Incomplete, incorrect, or illegible subscription orders, subscription orders submitted outside of the Offer Period, and subscription orders otherwise not in conformity with the terms set forth herein may be refused.

Subscription orders may only be submitted during the Offer Period. Investors participating in the Offering may subscribe for Offer Shares only for the offer price. In the event of receipt of multiple subscription orders from a single investor, the orders will be merged into a single order for the purpose of allocating the Offer Shares. Investors participating in the Offering may only submit subscription orders in euros. Subscription orders may only be submitted for a whole number of shares. Investors pay all

costs and fees payable in connection with the submission, cancellation, and amendment of their subscription orders according to the price list of the Nasdaq CSD account operator who accepted the subscription order. To subscribe for Offer Shares, the investor must have a securities account with a Nasdaq CSD account operator. Submitted subscription orders will be registered in the Nasdaq CSD.

In order to subscribe for Offer Shares, the investor must contact the account operator managing their Nasdaq CSD securities account and submit a subscription order for purchasing the Offer Shares during the Offer Period using the form below. Investors may submit subscription orders using any method offered by the account operator (e.g., by visiting the customer service office of the account operator in person, via an online banking system, or by other means). Subscription orders must be submitted to the account operator before the end of the Offer Period.

A subscription order must contain the following information:

Owner of securities account:	[name of investor]
Securities account:	[number of the investor's securities account]
Account operator:	[name of investor's account operator]
Security:	BERCMAN TECHNOLOGIES ORDINARY SHARE
ISIN code:	EE3100076407
Number of securities:	[Number of Offer Shares the investor wishes to subscribe for]
Price (per Offer Share):	€6 and 18 cents
Transaction amount:	[Number of offer shares the investor wishes to subscribe for, multiplied by the price per Offer Share]

Counterparty:	AS Bercman Technologies
Securities account of the counterparty:	99103689847
Account operator of the counterparty:	AS LHV Pank
Transaction type:	subscription
Payment method:	transfer of securities in exchange for payment

By submitting a subscription order, the investor:

- confirms that they have read and understood the company description and that they accept the terms of the offering set forth herein;
- confirms that they are based in Estonia and are not subject to the laws and regulations of any other jurisdiction that prohibit them from submitting the subscription order;
- accepts that the submission of the purchase order does not in itself entitle them to acquire the Offer Shares nor entail the conclusion of a contract of sale for the Offer Shares;
- accepts that the number of Offer Shares indicated by the investor in the subscription order is the maximum number of Offer Shares the investor wishes to acquire, and recognises that the investor may receive fewer, but not more, Offer Shares than indicated in the subscription order;
- undertakes to acquire the number of Offer Shares allocated to them, which shall not exceed the number of Offer Shares indicated in the subscription order, and to pay for them in accordance with the terms set forth herein;
- confirms that they are aware of the investment risk associated with investing in the shares, including the risk of losing part or all of the invested sum;
- accepts and agrees that the Issuer has the right to receive daily information from the registrar of the Estonian register of securities regarding submitted subscription orders;
- authorises and orders the account operator to forward the subscription order as registered to the Nasdaq CSD;
- authorises the Issuer and the Nasdaq CSD to process their personal data to the extent necessary for participation in the Offering;
- authorises the account operator or financial institution managing the investor's securities account or the Nasdaq CSD, as appropriate, to amend the investor's subscription order, including (a) to specify the value date of the transaction and (b) to specify the number of Offer Shares to be purchased by the investor as well as the total value of the transaction, which shall be calculated by multiplying the offer price by the number of Offer Shares allocated to the investor.

Investors may amend or cancel their subscription orders at any time before the end of the Offer Period. To do this, the investor must contact the Nasdaq CSD account operator through whom the relevant subscription order has been submitted and take the actions required by the account operator for the amendment or cancellation of subscription orders (different account operators and financial institutions may have different processes). The amendment or cancellation will take effect from the moment of amendment or withdrawal of the transaction order by the account operator.

Upon subscription for the Shares, the existing shareholders of Bercman will have the right to subscribe for Offer Shares in proportion to the nominal value of their shares, as provided for in § 345 of the Commercial Code. The group of shareholders with the pre-emptive right to subscribe described above will be determined as at the close of business of the Nasdaq CSD settlement system on 21 April 2022.

## 5.7 Payment for Shares

Payment for the shares will be in euros and the proceeds of the Offering will be raised in euro. An investor may only submit subscription orders if the bank account linked to their securities account with a Nasdaq CSD account operator contains sufficient funds to cover the entire transaction value specified in the subscription order.

By submitting a subscription order, the investor authorises the Nasdaq CSD account operator managing the bank account linked to the investor's securities account to immediately block off an amount corresponding to the total value of the transaction on the investor's bank account until the settlement is completed or the funds are released. The blocked amount

must be equal to the amount obtained by multiplying the offer price by the number of Offer Shares indicated in the subscription order.

If the Offer Shares cannot be paid for because the investor's cash account does not contain sufficient funds, the subscription order submitted via the securities account linked to the cash account will be refused and the investor will lose all rights to the Offer Shares specified in the subscription order.

## 5.8 Allocation rules

Bercman will decide on the allocation of the Offer Shares at its own discretion after the end of the Offer Period, at the latest on or around 4 May 2022. In the allocation, all investors will be treated equally under identical circumstances. The pre-emptive right to subscribe of the existing shareholders as described in point 5.6 above will be taken into account upon allocation. In addition to the Offering, Bercman may allocate Offer Shares at its discretion to institutional investors outside Estonia, provided that such investors can be considered qualified investors within the meaning of Article 2(e) of the Prospectus Regulation.

Members of the Issuer's project team, employees, members of the Management Board and the Supervisory Board, existing shareholders and other related parties will be treated equally with all other investors in determining the allocation of the Offer Shares, except in the event of the exercise of the pre-emptive right to subscribe set out above.

If the total volume of the Offering is not subscribed, Bercman has the rights set out in point 5.11 and the right to allocate all the subscribed Shares to all investors who have participated in the Offering.

### 5.9 Settlement of Offering

The Offer Shares will be transferred to each investor's securities account presumably on or around 6 May 2022. The transfers will be conducted pursuant to the procedure of 'delivery versus payment', concurrently with the transfer of the subscription amount from the investor's account to that of AS LHV Pank.

### 5.10 Release of funds

If the Offering or a part thereof is cancelled, an investor's subscription order is rejected in part or in whole, or the number of allocated Offer Shares is different from the number of Offer Shares subscribed for, the relevant account operator will release the funds blocked in the investor's current account or a part thereof (the amount exceeding the sum to be paid for the Offer Shares) in accordance with the account operator's terms presumably within one business day. Bercman cannot be held liable for the release of such a sum nor for the payment of interest on the released sum for the period during which it was blocked.

### 5.11 Cancellation of Offering

Bercman may cancel the Offering in full or in part or alter the terms and dates thereof at any time before the publishing of the allocation of the Offer Shares. Among other things, Bercman may cancel the Offering in full or in part or alter the terms thereof if the total volume of the Offering is not subscribed for.

Information regarding any alteration of the terms of the Offering or the cancellation of the Offering will be published on Bercman's website and as an exchange announcement via the information system of the Exchange.

### 5.12 Admission to trading of Shares

Bercman's Shares are traded on the Exchange's First North MTF. Bercman shall file an application with the Exchange for admission to trading of the Offer Shares on the Exchange's First North MTF, and the trading of the new Shares issued in accordance with clause 5.1 to Hasenberg OÜ is expected to commence on First North on or around 17 May 2022. If the Shares are not admitted to trading according to the planned schedule or if the Exchange decides not to admit the Shares to trading for any reason, investors will not be entitled to seek the repurchase of the issued shares from Bercman.

# 6 RISK FACTORS

## 6.1 Introductory remarks

Investment in the Offer Shares and Bercman's activities in general is subject to various risks that, either individually or in combination, may adversely affect Bercman and the value of Bercman's shareholders' investment or affect the ability to realise the shares. Any potential investor should carefully consider all of the information provided in the company description, including the risk factors described below. In addition to the following, there may be risks that are not currently known to Bercman or that Bercman currently considers to be insignificant, but which may also affect Bercman or the price of the shares. Investors may lose a part or the entire value of their investment if the risks materialise.

The Management Board finds that the following reflects the most significant risks related to investing in offer shares.

## 6.2 Risks related to Issuer's business

### 6.2.1 Risk stemming from short operating history and forecasts

Bercman is a young company that does not have a long history, which is reflected in the Issuer's current modest sales revenue, especially compared to the forecasts provided in the company description. There is no way to ensure that the forecasts are realised and if the results negatively differ from the forecasts provided in the company description, it may have a negative impact on the Issuer's financial results.

### 6.2.2 Market risk

There is no guarantee that the Issuer's products have or will have a market. The Issuer primarily operates in the development of software for traffic monitoring based on machine vision and the development of equipment for its implementation. The market for such products is still evolving and can change rapidly, and a significant increase in competition cannot be ruled out as the field of machine vision develops. Practical experience in applying machine vision in traffic speaks in favour of the Issuer, which reduces possible hesitations related to the introduction of innovative solutions in the public sector.

### 6.2.3 Risk related to technological developments

The company's development activities may take longer than expected and there is no guarantee that the development activities will lead to new technologies that can be used in the Issuer's future products. The Issuer has taken steps to mitigate this risk, including last year's acquisition of a 100% stake in Krakul, an information technology company focused on the development of the Internet of Things. Krakul has a team of 19 engineers who can contribute to Bercman's development activities as needed.



#### 6.2.4 Location risk

Bercman and its main partner are located in the Baltics, a region with rising labour costs (according to the European Commission, in 2020, the increase in labour costs in Estonia and Latvia was nearly threefold compared to the average of the euro zone (8.4% and 7.4% vs. 2.8%). This may have a negative impact on Bercman's competitiveness in entering new markets in the medium term.

#### 6.2.5 Financing risk

There is no assurance that the Issuer will be able to raise capital to the extent necessary to finance the company's growth and operations.

#### 6.2.6 Partner risk

As Bercman does not have a production unit, the company depends on partners for the production of its equipment. The ability of its partners to fulfil Bercman's orders and comply with the terms of the contracts concluded with Bercman may have a negative impact on Bercman's growth opportunities and financial results.

### 6.3 Legal and economic risks

#### 6.3.1 Changes in legislation

Bercman is a company operating under Estonian law and the legislation of the Republic of Estonia applies to Bercman's shares. Relevant legislation may change if new acts are adopted or current legislation is amended or interpretative practices change. Changes in legislation could adversely affect Bercman's business, financial situation, performance and/or prospects. Changes in tax legislation may increase the tax burden of shareholders and affect the return on investment made in the Shares. The

forementioned may have a negative effect on the price of the Shares.

Personal data protection requirements applicable to the issuer's activities (especially the use of machine vision to increase road safety in urban areas) could become more stringent, which has an adverse effect on the issuer, as the issuer has to incur unforeseen expenses, which in turn restricts financial results.

#### 6.3.2 Fluctuation in the prices of components required for production

If the prices of components used in Bercman's products significantly increase, primarily as a result of problems with global supply and more expensive raw materials, it is likely that the Issuer will be unable to reflect this price increase in the final price, as customers may not be willing to accept it. However, if the issuer does increase prices, customers may reduce order volumes, which in turn decreases the Issuer's turnover and financial results.

#### 6.3.3 Unfavourable economic developments

Bercman's development and economic and financial performance are significantly affected by the regional and global political and economic environment. The impact of the health crisis caused by COVID-19 on the global and regional economy remains unclear. Although the downturn in spring 2020 was followed by a rapid upswing in the second half of the year, the health crisis and the increase in energy prices that accelerated early this year, inflation and the complicated war in Ukraine have disrupted and continue to disrupt the normal functioning of markets, both in terms of movement of labour and goods, as well as the production of goods and provision of services. The global financial crisis that began in 2008

led to an economic downturn, higher unemployment rates and decrease in the value of assets in Estonia. The economic downturn caused difficulties for entrepreneurs operating in all fields in the Estonian market. A similar economic downturn could have a negative impact on Bercman's business, primarily due to reduced demand and higher input prices. Bercman constantly monitors developments in both the domestic and international markets. However, it is not possible to accurately predict the timing or extent of economic or political conditions, especially in relation to the COVID-19 crisis as well as the unprecedented high energy prices and the uncertainties regarding the mitigation measures to be implemented, as well as the increasingly complex security situation in Eastern Europe in recent times.

### 6.3.4 Contractual risks

The Issuer's activities depend on the validity and enforceability of transactions and contracts concluded by the Issuer, some of which may be affected by foreign law.

## 6.4 Risks related to shares, their offer and admission to trading

### 6.4.1 Payment of dividends is not guaranteed

Bercman has no obligation to pay dividends. Bercman cannot guarantee the regular payment of dividends in the future. In the future, Bercman plans to invest profits into the company and is not planning to pay dividends to shareholders in the foreseeable future. The management's recommendations for profit distribution are based on financial results, working capital requirements, investment needs, and strategic considerations. They may not coincide with the short-term interests of all

shareholders. The payment of dividends and their amount depends on the decision of the general meeting of shareholders.

### 6.4.2 New issues and dilution

In the future, Bercman may issue new shares for a variety of reasons, including to finance the company's development or reduce debt. If the current shareholders decide not to subscribe for additional Shares within the offer of new Shares, the issue of new Shares may result in the dilution of holdings of the existing shareholders. This may reduce the proportional holding and voting rights of shareholders in Bercman.

### 6.4.3 Cancellation of and under-subscription for Offering

Although Bercman will make every effort to ensure that the Offering is successful, Bercman cannot guarantee the success of the Offering or that investors will receive the Offer Shares that they subscribed for. Bercman has the right to cancel the Offering until the allocation is decided. The Offering may also be cancelled in the part of the Offering not subscribed for. In the event of under-subscription and partial cancellation of the Offering, Bercman will need to find alternative sources of financing for the planned growth strategy published in the company description or make the growth strategy more conservative, reduce the volume of investments, or extend the investment schedule.

### 6.4.4 Risk related to admission to trading

Bercman applies for the admission of shares to trading on First North and will take all appropriate measures to act in accordance with the Rules and Regulations and applicable law for the exchange to satisfy Bercman's application.

application. Despite Bercman's actions and the fact that Bercman's Shares are currently traded, Bercman cannot guarantee that the Offer Shares will be admitted to trading on First North.

#### **6.4.5 Liquidity risk**

First North MTF is more volatile and less liquid than the regulated market. Bercman cannot guarantee that an active secondary market for the Shares on First North develops after admission to trading. Therefore, the liquidity of the Shares on First North may be limited or insufficient. Relatively low market capitalisation and liquidity may restrict the investors' ability to sell or buy the Shares on First North or increase the volatility of the Share price. Due to the low level of investor activity in the market, the impact of individual transactions may have a significant impact on the market price of a security and the difference between purchase and sale prices may be greater than usual.

# 7 PROFIT AND BENEFIT DISTRIBUTION POLICY

Bercman is not planning to pay dividends to shareholders in the near future. Bercman's plans for the future are above all linked to the growth of the company, which is why Bercman considers it necessary to channel the funds generated into the development of the business model and products and the expansion of sales activities.

In summary, the shareholders have the following rights:

- to buy, sell, pledge or otherwise dispose of the Shares;
- to participate in the distribution of Bercman's profit in accordance with the decision of the general meeting of shareholders and the number of Shares, if Bercman decides to distribute the profit. However, income tax is withheld in Estonia to the extent provided for in the Income Tax Act on the payment of dividends. If it is decided to pay dividends to shareholders or distribute profits, the Issuer will withhold income tax on the profit distributions in accordance with Estonian law;
- to participate and vote at the general meeting of shareholders in accordance with the provisions of Bercman's Articles of Association, based on the number of Shares owned by the shareholder;
- to receive information on the activities of the Issuer to the extent and pursuant to the procedure provided by law;
- to nominate candidates for members of the Supervisory Board;
- to participate in the distribution of the assets remaining after the liquidation of the Issuer.

## 8 FURTHER INFORMATION

Bercman follows good corporate governance. Bercman is not an obliged entity within the meaning of the Estonian Money Laundering and Terrorist Financing Prevention Act.

If the Issuer becomes aware of any material facts, errors or inaccuracies relating to the information contained in the company description which may affect the valuation of the Shares and which become apparent after the publication of this company description but before the end of the Offer Period or the commencement of trading, the Issuer will prepare an addendum to the company description and, if necessary, supplement the short summary and/or translations of the company description. The annex to the company description and the supplements to the brief summary and/or translations are disclosed in

the same way as the company description. The annex to the company description is an integral part of the company description.

The company description can be accessed on the website of the Exchange ([www.nasdaqbaltic.com](http://www.nasdaqbaltic.com)) as well as the website of Bercman ([www.bercman.com](http://www.bercman.com)). The annual reports of the Issuer, with the auditor's reports are also available on Bercman's website.

# 9 DEFINITIONS AND ACRONYMS

<b>Shares</b>	Bercman shares
<b>Bercman</b>	AS Bercman Technologies, a public limited company registered in Estonia with registry code 14134425
<b>Bercman Group</b>	Bercman and its subsidiary Krakul jointly
<b>Exchange</b>	Nasdaq Tallinn AS
<b>Issuer</b>	Bercman
<b>Financial statements</b>	The Issuer's audited annual reports for 2021, 2020 and 2019
<b>ICP</b>	Ideal Client Profile
<b>IP</b>	Intellectual property
<b>IoT</b>	Internet of Things
<b>Krakul</b>	Bercman's subsidiary Krakul OÜ, a private limited company registered in Estonia with registry code 12458980
<b>Regulation</b>	Minister of Finance Regulation No 7 of 21 February 2022 on the requirements for an information document for a securities offering
<b>Nasdaq CSD</b>	Estonian register of securities, the registrar of which is Nasdaq CSD SE (Latvian registry code 400003242879)
<b>Offering</b>	Public offering of the Offer Shares
<b>Offer Share(s)</b>	New shares issued by Bercman to be offered to the public under this Offering
<b>Offer Period</b>	From 10:00 on 22 April 2022 to 16:00 on 2 May 2022, during which the Offer Shares will be publicly offered
<b>Prospectus Regulation</b>	Regulation (EU) 2017/1129 of the European Parliament and of the Council
<b>Rules and Regulations</b>	Rules and regulations of the First North MTF of the Exchange
<b>SMA</b>	Securities Market Act



# 10 ANNEXES

**Annex 1** – Articles of Association of Bercman – [available here](#)

**Annex 2** – Financial statements – [available here](#)

