

**Project Management:**

Technical Partners International Inc.  
Registration Nr 1845122 (Ontario)  
"TP Riga" SIA  
Registration Nr. 40103217350 (Latvia)

**Representative:**

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**Additional Information:**

www.technicalpartners.ca  
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**Date/Place Business Established:**

April, 1992, Toronto, Canada  
February, 1994, Riga, Latvia

**Form of Business:**

project management  
consulting

**Areas of expertise:**

project management  
development projects  
food/pharmaceutical production  
manufacturing  
construction related services

**Objectives:**

Introduce infrastructure management  
services in the Baltic region.

**Pay-Back Period**

Less than three years

**Funding Requirement:**

€850,000

**Use of funds**

Equipment Purchases  
Working Capital

**Interest on loan:**

15 % budgeted for €1,250,000

A detailed budget is available.  
A comprehensive business plan is  
currently not available though this  
information memorandum provides all  
pertinent information.

**This PROJECT** will develop an infrastructure management business using advanced software and know-how in a private Joint Venture (JV) company funded by private investors for use in the Baltics States (Latvia, Lithuania and Estonia) to cost-effectively manage municipal infrastructure assets ranging from county roads, city streets, sidewalks, curb and gutter, signs and signals, bridges, parking lots, wastewater and storm drainage systems, water pipelines, park features and other miscellaneous assets. It involves purchasing and equipping a mobile unit (MU) that will collect data, then provide services to administer the maintenance program.

**The OPPORTUNITY:** Road maintenance agencies in Latvia currently perform road maintenance, inspection and administration manually. This is time consuming, subject to incorrect decisions and poor budget planning.

**The PROMOTING COMPANIES:** Technical Partners, registered in Latvia as "TP Riga" SIA and Technical Partners International Inc. in Canada, has been in Latvia since 1993. Dahlgren Corp provides the distribution rights, technology and know-how.

Dahlgren Corp of the US is the distributor for GoodPointe Technology, ZOOM Information Systems and Lambda Tech all of the US providing technology and know-how for mobile mapping and right of way infrastructure data collection systems, and infrastructure management software used to provide more objective decision making and better budget planning to those responsible for infrastructure maintenance.

Technical Partners intends to capitalize on the above by forming a Latvian based Joint Venture (JV) with Dahlgren Corp and a strategic investment partner. The JV will be a licensed provider of the ICON™ software and infrastructure management services and market both the GPSVision™ system (which will map infrastructure providing data collection required for ICON™) and the ICON™ maintenance programs and services.

**SOURCES of INCOME:**

- Municipal and Regional governments
- Government highways and roads departments

**The PROMOTERS:** Ed Kalvins, the owner of Technical Partners, is a Latvian-Canadian fluent in both Latvian and English and based in Latvia. Ed has extensive engineering and management experience from Canada, and over 20 years experience in Latvia. His team provides local know-how and familiarity with regulations and procedures. He is also networked with partners in Estonia and Lithuania. Guna Skangale is a Latvian Project Manager and road construction engineer fluent in Latvian, Russian and English with considerable experience related to infrastructure maintenance in the Baltic region.

**The REQUIREMENT: €1,250,000** is required in the first six months of the project of which Dahlgren Corp is prepared to invest **€400,000**, leaving a need for **€850,000**. This may be in the form of a loan or venture capital. The pay-back period is less than three years.

**The REWARDS:** A 15% interest rate has been budgeted for loans. Equity shares are negotiable.

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TO PUBLIC CIRCULATION.**

## 1 FORWARD

This project is to provide infrastructure management and maintenance services for roads and railroads

The **Dahlgren Corp** of the US is the distributor for GoodPointe Technology, ZOOM Information Systems and Lambda Tech all of the US providing technology and know-how for mobile mapping and right of way infrastructure data collection systems, and infrastructure management software used to provide more objective decision making and better budget planning to those responsible for infrastructure maintenance.

**Technical Partners**, located in Riga, Latvia, represents the **Dahlgren Corp** and its affiliated companies.

The **Dahlgren Corp** and **Technical Partners** intend to form a private joint venture (JV) company funded by private investors. The initial project will focus on roads.

These services would be offered by the JV using a fully equipped mobile unit for data collection. The data would be used to develop a maintenance program and budget. The JV could also administer the maintenance program.

Clients would include federal, regional and municipal departments responsible for roads and railroads.

One mobile unit (MU) would be available for the Baltic region.

There are no plans to sell the MU to a municipality or to the highway's department, though this is an option.

Initially, services will be provided in Latvia, however, the territory could be expanded to include Estonia, Lithuania and Belarus, and perhaps other Scandinavian countries.

## 2 THE ORGANIZATION

### 2.1 Business Model

A Joint Venture (JV) company will be formed in Latvia to manage this project.

It is expected that the JV would have three or more participants. These partners will include Dahlgren Corp, Technical Partners and an investor and/or strategic partner.

The JV office will be located in Riga, Latvia and manned with permanent or contract personnel. The office will be equipped to accommodate 4 people. Services from the Dahlgren Corp will be provided to the JV on a contract basis.

The Dahlgren Corp, while Technical Partners will be responsible for sales and service at customer level, and providing personnel to complete assignments as required by the Dahlgren Corp. JV personnel in Latvia will be trained in due course to undertake the technical aspects of assignments, but will complete them under the supervision of the Dahlgren Corp.

### 2.2 Participants

**GoodPointe Technology** (<http://www.goodpointe.com/>) of St. Paul, Minnesota, U.S.A. is the company providing the expertise, and is the developer and primary distributor of the InfrastructureCONSultant (ICON) infrastructure management software suite. The ICON software suite enables clients to more cost-effectively manage infrastructure assets that range from county roads, city streets, sidewalks, curb and gutter, signs and signals, bridges, parking lots, wastewater and storm drainage systems, water pipelines, park features and other miscellaneous assets. GoodPointe provides consulting and expertise, and is partnered with various relevant companies to provide comprehensive services and the necessary support. **ZOOM Information Systems** (<http://www.zoominfosystems.com/>) of Fort Wayne, Indiana in the U.S. develops transportation software and systems solutions for City, County and State governments, DOTs and the traveling public. This includes both on-board and back-end development of Intelligent Transportation Systems (ITS), Vehicle Connectivity and Tracking Systems (AVL), Imaging-Based Infrastructure Data Collection and Analysis Tools and The Next Generation Rest Area technology platform. **Lambda Tech International** also of Fort Wayne, Indiana (<http://www.lambdatech.com/>), is the developer of GPSVision™. The GPSVision™ system is used to collect digital images and laser elevation data along highways and other right-of-ways while traveling at posted speed limits. These georeferenced digital images are used with Lambda Tech's unique Feature Extraction Software to position and measure physical features, such as curb lines, traffic signs, manholes, pedestals and building locations. The georeferenced digital image data and the position and attribute data of the features are stored in a simple format that can be used in standard GIS systems. Once the processed data is loaded into the target GIS, the data is easily displayed in map format, analyzed and/or manipulated utilizing GIS database query functions. A typical client can use this data to accurately position items of infrastructure, develop base maps or view image data directly from an operator's personal workstation in the vehicle or in the office.

**Dahlgren Corp** was formed as the International distribution company for the various products and equipment based services of GoodPointe Technology, ZOOM Information Systems and Lambda Tech. Initially Dahlgren Corp will include the needed GPSVision™ equipment licensing from Lambda Tech. To the extent that ICON™ licencing may require special consideration it may be through Dahlgren Corp or directly from GoodPointe Technology.

**Technical Partners** ("TP Riga" SIA / Technical Partners International Inc.) represents the **Dahlgren Corp** in the Baltic States. **Technical Partners** is a multi-disciplined Canadian consulting company established in 1992 to serve the Baltic region, and in particular, the Latvian market through its Riga, Latvia office at Vienības gatve 109. As such, it is networked with local professionals to provide equipment and services originating from the West to enhance local capability. **Technical Partners** will provide local project management and complete a sales, service and marketing function in the region. As the business develops, Technical Partners personnel will be assigned to the JV and trained to provide local client technical support under the supervision of the **Dahlgren Corp**.

### 2.3 Names of Key Personnel

Darwin Dahlgren, CEO, **Dahlgren Corp** (USA) and **GoodPointe Technology** (USA)  
Anthony J. Kadlec, President, **GoodPointe Technology** (USA)

Ed Kalvins, the owner of **Technical Partners International Inc.** (Canada) / **“TP Riga” SIA** (Latvia). Project promoter for the Baltics.

Guna Skangale, **“TP Riga” SIA** (Latvia) Project Manager.

Rolands Kromanis, **“TP Riga” SIA** (Latvia) Project Engineer

Other personnel are listed in section 8, MANAGEMENT and KEY PERSONNEL

## 2.4 Briefly about Latvia

Latvia regained its independence from the Soviet Union in 1991 and began the difficult process of converting from a planned to a free market economy. In the mid 90's, Latvia was experiencing the challenges of economic transition, including multiple banking crises, economic boycotts by Russia, unfamiliarity with western (particularly European) practices and politically-related development issues.

Latvia is now considered a western state that must abide by EU regulations, having joined the European Union and NATO in 2004. This provides a more stable and predictable foundation.

2009 saw a significant economic downturn because of the world economic crisis. In 2010, the government of Latvia initiated austerity programs as demanded by the International Monetary Fund (IMF). These measures have resulted in the stabilization of the Latvian economy and have led to growth since late 2011 – despite debt problems in the Eurozone. Latvia's credit rating continues to be upgraded along with comments about its positive outlook. This is also reflected in Standard & Poor's November 14th, 2012 rating adjustments, changing long and short-term local and foreign currency sovereign credit ratings on Latvia from BBB-/A-3 to BBB/A-2, and Latvia's transfer and convertibility (T&C) assessment from A- to A. This rating now stands at BBB+ and the (T&C) at AAA.

The now independent Latvia has also benefited from its history with established traditions in banking, manufacturing, education and development that provide the foundations for future growth and development.

Latvia adopted the € on 1<sup>st</sup> January 2014.

Latvia has favourable company tax rates of 15%. There are no restrictions on the repatriation of profits or the transfer of funds from the country.

### 3 INDUSTRY ANALYSIS

Initially, services will be provided in Latvia, however, the territory could be expanded to include Estonia, Lithuania and Belarus, and perhaps other Scandinavian countries. Similar services are not provided in Latvia. The market in other countries is yet to be explored.

#### 3.1 Size and Growth Trends

Though the economy has been improving since the crisis of 2009-2010, there has been a marked population decline with extensive emigration, particularly of the younger generation, to Western Europe in search for jobs. This has resulted in a fairly stagnant economic situation and a general reluctance to invest in non-EU sponsored projects.

The bank sector has not helped either, as getting loans is extremely difficult, and investment risk capital is difficult to find as most lending institutions are extremely conservative.

#### 3.2 Vulnerability to Economic Factors

The current geopolitical situation, particularly with Ukraine, is not without effects on the Baltic States. The climate of uncertainty is generating a “wait and see” mood for investments and for investors. It could be that the new reality as regards to Russia will normalize shortly in that Russia will be recognized as an adversary, but everyone will get used to it.

Services will have to be offered with the intent of demonstrating capability.

The main factor that will affect the success of this project is that the technological approach to determining existing factors (eg. pavement thickness, road quality, number of signs, etc.) will be objectively documented via cameras and sensing equipment, removing the human factor which could be affected by competence or bias.

Another important factor will be the cost reduction or avoidance benefits associated with the service, but objectivity will be a major issue and selling point.

#### 3.3 Seasonal Factors

Winters are generally cold and sub-zero. Sub-zero conditions usually prevail from December to March. Spring and autumn weather is moderate in the 10 to 20°C, while summers are somewhat warmer.

Data acquisition work must be done on clear days, so this normally limits this function to the late spring, summer and early autumn avoiding rainy periods and snow.

#### 3.4 Technological Factors

Latvia currently does not have this kind of service or technology although it has been offered from Finland. However, purchasing and maintaining such equipment is prohibitive. Estonia may have this technology, but this needs to be confirmed. We have no information about Lithuania.

#### 3.5 Regulatory Issues

Regulatory issues will have to be investigated as the project develops. All services will have to conform to EU and local regulations.

## **4 TARGET MARKETS**

### **4.1 Main Clients**

The main client group is expected to be regional and municipal governments that are charged with road system maintenance, and the highways department under the Transportation Ministry for major highways.

It is not expected that the private sector would be involved.

### **4.2 Purchasing Patterns and Buying Sensitivities**

The purchasing of maintenance services is usually motivated by the need to meet regulations or control budgets.

Government or Municipal agencies purchasing equipment or services have to include the cost in their budgets, then go through a tendering process. This is both time-consuming and the results are not assured. If this includes the addition of personnel, this further complicates matters. Because Latvia is a small country, it is highly unlikely that any entity would find it economical to purchase a MU and the infrastructure required to support it. Hence the JV offers a workable solution.

Government agencies have a limit as to services that can be purchased under one contract without requiring a tender. The model offered by this JV simplifies the process for government bodies and allows for expenditures within departmental authorization limits. This is also necessary to minimize bureaucracy

## **5 THE COMPETITION**

### **5.1 Competition**

There are no known companies offering mobile mapping units in the region.

### **5.2 Barriers To Entry**

The technology and know-how is the main barrier to entry. GoodPointe Technology has this covered.

Understanding the economic climate, local culture and having a network within the industry is mandatory for promoting the project. Technical Partners is well networked.

## **6 MARKETING AND SALES STRATEGY**

### **6.1 Overall Strategy**

A joint venture will be created to service the industry.

### **6.2 Marketing Vehicles & Tactics**

The first "push" will be to personally approach municipal or regional leaders who are connected politically and known to the project promoters. This will then be expanded to other municipalities. Contacts who have the ability to lobby our services will be approached to partner in the initiative.

### **6.3 Sales Force & Structure**

Ed Kalvins will be responsible for sales with the assistance of partners who will be motivated to attract clients. There are no plans to hire permanent or contract sales people, but this may change if required.

## 7 OPERATIONS

The basis of this project will be the **Dahlgren Corp's** expertise developed in and provided from the U.S., and supported by Technical Partners knowledge of the local conditions in Latvia and the Baltics.

### 7.1 The objective of the JV

A JV will be established to service the market. The JV will provide clients with the tools to economically and objectively manage road maintenance within their jurisdictions by managing and tracking the economic condition of physical infrastructure, including: pavements, pavement markings, signs, signals, intersection data, storm sewers, sanitary sewers, water main systems, bridges, and any other miscellaneous infrastructure assets located in a right of way using a high-powered relational database management system.

It is noted that Latvia is a relatively small country. The roads network includes:

- 15,000 km of paved surfaces and
- 55,000 km of unpaved surfaces.

These come under numerous jurisdictions, which include the Transportation Ministry, regional governments and municipal departments. This fragmentation of responsibility means that no one jurisdiction is in a position to purchase and use a MU for its own purposes. A shared approach must be used, which is proposed under the JV.

The MU can easily survey paved surfaces, but can also be used for gravel surfaces.

### 7.2 The Process

There basic stages in the process include:

1. data collection
2. maintenance program development
3. maintenance program administration

#### 7.2.1 Data Collection

Data collection is accomplished by an appropriately equipped mobile unit (MU).

The MU is a van equipped with video equipment and sensing devices using GPS technology which allows for measurement of parameters such as pavement roughness, rutting and video technology which records and allows for the measurement pavement distress and of anything that is visible to the eye.

This equipment can also be mounted on a rail vehicle for rail maintenance. This is currently not part of the scope of this initiative, but can be added later. A special vehicle is required for rail surveying.

The actual data collection must be done on a day with good lighting and clear ground conditions (i.e. no snow or rain water). Dusk, dawn and foggy conditions are not appropriate. Clear to heavy overcast days are acceptable.

Data is collected in a right of way in the direction of traffic flow. Multiple lanes can be accommodated. For certain data collection elements like pavement condition, pavement markings, guardrails, etc. data can be collected in on pass. For other elements such as signs it is recommended that two passes must be made



to observe the signs from the perspective of the traveling motorist.

The data is normally surveyed every three to five years to ensure changes are recorded.

Surveying can be applicable to new surfaces as an independent quality control check for completed works.

### 7.2.2 Maintenance Program Development

The maintenance program is developed based on the data collected using a special maintenance program and completed by trained personnel, after which it is available to the client for the administration of the program.

The data for the maintenance program will include:

- indication of items requiring immediate attention,
- the condition of infrastructure items,
- an indication as to when road repairs should be planned, and at what cost,

### 7.2.3 Maintenance Program Administration

The maintenance program may be administered by the client, or by the JV on a contract basis.

If the JV is entrusted with administering the maintenance program, the JV will issue:

- an annual maintenance plan and budget,
- update this plan every six months,
- issue work orders for approval and implementation to the client as required,
- work with the client should modifications be necessary.

Should the client wish to complete the maintenance himself, this will involve purchasing the necessary licensing fees, and training staff. This can be arranged with the JV. It is considered that this scenario is unlikely because of the small jurisdictions.

## 7.3 Costs and Fees

### 7.3.1 Data Collection

Data collection is completed as a basic service at an agreed-on fee, and is based on a preliminary scoping survey or needs assessment (User Requirement Specification - URS). This URS will be further developed and streamlined during the process of preparing the preliminary maintenance program. Since any infrastructure element that can be viewed in the collected images can be inventoried and condition surveyed there are numerous combinations of services that can be provided.

The **Basic Service** for data collection includes pavement roughness, rutting and a video record which allows for the measurement pavement distress and of anything that is visible to the eye. Applicable, approximate costs:

Basic Services - Existing roads	Cost per km		
	Main state roads	City/Town Roads	Gravel roads
Data collection	\$250	\$300	\$350
Data collection	€221	€265	€309

If pavement thickness is also required, the following costs will apply if surveying is done with the basic services.

Basic Services - Existing roads including pavement thickness	Cost per km		
	Main state roads	City/Town Roads	Gravel roads
Data collection	\$340	\$390	n/a
Data collection	€300	€344	n/a

In the case of freshly paved or new roads, the client may wish to ascertain pavement thickness for objective, quality control purposes. Applicable, approximate costs:

Income from pavement thickness measurement services	Cost per km		
	Main state roads	City/Town Roads	Gravel roads
Data collection	\$200	\$200	n/a
Data collection	€177	€177	n/a

### 7.3.2 Maintenance Program Development

Fees for this section vary on the information required by the client.

The basic package includes pavement inventory, profile data including pavement material, rutting, surface distress, pavement roughness. Applicable, approximate costs:

Services	Cost per km		
	Main state roads	City/Town Roads	Gravel roads
Maintenance program development	\$120	\$100	\$50
Maintenance program development	€106	€88	€44

Additional costs will include:

1. Carriageway (as navigation data)
2. Bridge Data e.g., Location, Span, Type etc.,
3. Road Marking
4. Traffic Signs, Loops
5. Directional & Local Signs
6. Signals
7. Streetlight Poles and heads
8. Sidewalk, Barriers, Access ways etc., Sidewalk Field Survey Check
9. Street Names
10. Guardrails
11. Hydrants
12. Manholes
13. Any other element as identified during the survey

Applicable, approximate costs:

Additional Services for Maintenance program development	Cost per km		
	Main state roads	City/Town Roads	Gravel roads
1. Carriageway (as navigation data)	\$0	\$0	\$0
2. Bridge Data e.g., Location, Span, Type etc.,			
3. Road Marking			
4. Traffic Signs, Loops			
5. Directional & Local Signs			
6. Signals			
7. Streetlight Poles and heads			
8. Sidewalk, Barriers, Access ways etc., Sidewalk Field Survey Check			
9. Street Names			
10. Guardrails			
11. Hydrants			
12. Manholes			
13. Any other element as identified during the survey			

### 7.3.3 Maintenance Program Administration

Maintenance program administration costs include the cost of the software system maintenance and database updates over the projected 5 year period. This service commences once the User Requirement Specification has been set and is dependent on the number of km of roads, and the information required under the maintenance program. Applicable, approximate costs:

Services	Cost per km		
	Main state roads	City/Town Roads	Gravel roads
Maintenance program administration	\$116	\$116	\$116
Maintenance program administration	€102	€102	€102

The cost of additional services are shown in the table below:

Additional Services for Maintenance program administration	Cost per km		
	Main state roads	City/Town Roads	Gravel roads
1. Carriageway (as navigation data)	\$0	\$0	\$0
2. Bridge Data e.g., Location, Span, Type etc.,			
3. Road Marking			
4. Traffic Signs, Loops			
5. Directional & Local Signs			
6. Signals			
7. Streetlight Poles and heads			
8. Sidewalk, Barriers, Access ways etc., Sidewalk Field Survey Check			
9. Street Names			
10. Guardrails			
11. Hydrants			
12. Manholes			
13. Any other element as identified during the survey			

### 7.4 The benefits

Benefits include:

- Facts replace opinions.
- Conclusions are objective and verifiable through surveyed data.
- Information is immediately available and easy to understand

- Limited funds are used in the most cost-effective way
- Maintenance priorities are set and achieved with confidence

## 7.5 Capacity Utilization

The MU has a capacity of doing 36,000 km in one year. This is based on good weather conditions all year round. Latvia has 15,000 km of paved surfaces, and 55,000 km of unpaved surfaces. To cover direct costs, the unit must have **4,200** billable km per year.

Normal procedures would involve collecting data every 3 to 5 years, that is, at the beginning; there would be a comprehensive data collection with the MU surveying the selected road(s), followed with updates every three years where the mobile unit would redo the previous selection to up-date the situation. Additionally the system requires annual software and database maintenance.

## 7.6 Roads in Latvia

### Roads in Latvia

[http://lvceli.lv/eng/roads\\_in\\_latvia/](http://lvceli.lv/eng/roads_in_latvia/)

Population of Latvia as of January 1, 2014 – 2 005 200

There are 73 275 km of roads and streets registered in Latvia.

The average density of the roads network is 1.134 km per 1 km<sup>2</sup>.

The total length of roads under the supervision of SJSC "Latvian State Roads" - 20 093 km.

The average density of the state roads network is 0.311 km per 1 km<sup>2</sup>.

Road classes	Road length as at January 1, 2014, km			
	asphalt-concrete and other bituminous pavements	crushed-stone and gravel pavements	without pavement	total length of road network
<b>State roads, including:</b>	<b>8743</b>	<b>11350</b>	-	<b>20093</b>
<b>Main roads (A)</b>	1674	-	-	1674
<b>Regional roads (P)</b>	4372	1016	-	5388
<b>Local roads (V)</b>	2697	10334	-	13031
<b>Municipal roads and streets, including:</b>	<b>5652</b>	<b>32828</b>	-	<b>38480</b>
<b>roads</b>	1105	29388	-	30493
<b>streets</b>	4547	3440	-	7987
<b>Forest roads</b>	<b>24</b>	<b>8346</b>	<b>2832</b>	<b>11202</b>
<b>Private roads</b>	<b>500</b>	<b>3000</b>	-	<b>3500</b>
<b>Roads and streets, total</b>	<b>14919</b>	<b>55524</b>	<b>2832</b>	<b>73275</b>

### Bridges

The Latvian State Roads is responsible for 945 bridges, out of which:

887 - reinforced concrete bridges;

14 - stone masonry bridges;

39 - steel bridges;

5 - wooden bridges.

**Total length of bridges - 30 632 metres.**

### Main State Roads

Number	E-road	Route	Length (km)
A1	E67	Rīga - Ainaži (EE border)	101
A2	E77	Rīga - Sigulda - Veclaicene (EE border)	196
A3	E264	Inčukalns - Valmiera - Valka (EE border)	101
A4	E67 E77	Rīga ring road (Baltezers - Saulkalne)	20
A5	E67 E77	Rīga ring road (Salaspils - Babīte)	40
A6	E22 E262	Rīga - Daugavpils - Krāslava - Pāternieki (BY border)	307
A7	E67	Rīga - Bauska - Grenctāle (LT border)	85
A8	E77	Rīga - Jelgava - Meitene (LT border)	76
A9		Rīga - Skulte - Liepāja	199
	E22	Rīga - Ventspils	190
A11		Liepāja - Rucava (LT border)	57
A12	E22 E262	Jēkabpils - Rēzekne - Ludza - Terehova (RU border)	166
A13	E262	Grebņeva (RU border) - Rēzekne - Daugavpils - Medumi (LT border)	163
A14	E262	Daugavpils ring road (Tilti - Kalkūne)	15
A15	E262	Rēzekne ring road	7

**Regional Roads**

Number	Route	Length (km)
P1	Rīga (Jaunciems) - Carnikava - Adaži	16.5 km
P2	Juglas papīrfabrika - Upesciems	2.7 km
P3	Garkalne - Alaukstis	92.8 km
P4	Rīga - Ērgļi	101.3 km
P5	Ulbroka - Ogre	26.0 km
P6	Saulkrasti - Sēja - Ragana	23.9 km
P7	Ragana - Turaida	9.8 km
P8	Inciems - Sigulda - Ķegums	72.3 km
P9	Ragana - Limbaži	38.9 km
P10	Inčukalns - Ropaži - Ikšķile	40.6 km
P11	Kocēni - Limbaži - Tūja	59.3 km
P12	Limbaži - Salacgrīva	44.6 km
P13	Limbaži - Aloja	31.6 km
P14	Umurga - Cēsis	39.3 km
P15	Ainaži - Matīši	60.3 km
P16	Valmiera - Matīši - Mazsalaca	45.3 km
P17	Valmiera - Rūjiena - Estonian border (Unguriņi)	55.9 km
P18	Valmiera - Smiltene	34.5 km
P19		
P20	Valmiera - Cēsis - Drabeši	39.9 km
P21	Rūjiena - Mazsalaca	21.5 km
P22	Valka - Rūjiena	51.2 km
P23	Valka - Vireši	48.0 km
P24	Smiltene - Valka	41.8 km
P25	Smiltene - Strenči	29.5 km
P26	Sedas pievedceļš	2.5 km
P27	Smiltene - Velēna - Gulbene	64.1 km
P28	Priekulji - Rauna	19.0 km
P29	Rauna (Vidzemes šoseja) - Drusti - Jaunpiebalga	32.0 km
P30	Cēsis - Vecpiebalga - Madona	86.5 km
P31	Ērgļi - Drabeši	52.5 km
P32	Līgatne (Vidzemes šoseja) - Skrīveri	73.2 km
P33	Ērgļi - Jaunpiebalga - Saliņkrogs	61.2 km
P34	Sinole - Zeltiņi - Silakrogs	41.6 km
P35	Gulbene - Balvi - Vijaka - Russian border (Vientuļi)	69.5 km
P36	Rēzekne - Gulbene	87.2 km
P37	Pļaviņas (Gostiņi) - Madona - Gulbene	90.9 km
P38	Cesvaine - Velēna	37.6 km
P39	Alūksne - Estonian border (Ape)	30.3 km
P40	Alūksne - Zaiceva	25.0 km
P41	Alūksne - Liepna	33.0 km
P42	Vijaka - Zaiceva - Russian border (Pededze)	47.4 km
P43	Litene - Alūksne	27.0 km
P44	Ilzene - Līzespasts	21.7 km
P45	Vijaka - Kārsava	53.1 km
P46	Dubļeva - Cērpene	22.8 km
P47	Balvi - Kapūne	24.0 km
P48	Kārsava - Tīlža - Dubļukalns	47.8 km
P49	Kārsava - Ludza - Ezernieki	75.9 km
P50	Kārsava - Russian border (Aizgārša)	15.2 km
P51		
P52	Zīlupe - Šķaune - Ezernieki	59.2 km
P53		
P54	Rēzekne - Greiškani	6.7 km
P55	Rēzekne - Dagda	58.0 km
P56	Malta - Kaunata	27.3 km
P57	Malta - Sloboda	36.5 km
P58	Vijāni - Preiļi - Spoģi	62.4 km
P59	Vijāni - Ružiņa - Malta	28.9 km
P60	Dagda - Aglona	35.3 km
P61	Krāslava - Dagda	34.2 km
P62	Krāslava - Preiļi - Madona	141.8 km
P63	Līvāni - Preiļi	35.6 km
P64	Višķi - Nīcgale	31.5 km
P65	Stropi - Krauja	5.0 km
P66	Daugavpils apvedceļš (Tabore - Laucese)	9.6 km

Number	Route	Length (km)
P67	Daugavpils - Tilti	13.1 km
P68	Daugavpils - Skrudaliena - Belarusian border (Silene)	29.5 km
P69	Skrudaliena - Kaplava - Krāslava	34.9 km
P70	Svente - Lithuanian border (Subate)	39.0 km
P71	Pievedceļš Ilūkstei	3.1 km
P72	Ilūkste - Bebrene - Birži	68.0 km
P73	Vecumnieki - Nereta - Subate	116.5 km
P74	Siliņi - Akniste	23.1 km
P75	Jēkabpils - Lithuanian border (Nereta)	60.6 km
P76	Aizkraukle - Jēkabpils	46.0 km
P77		
P78	Pļaviņas - Ērgļi	32.7 km
P79	Koknese - Ērgļi	38.6 km
P80	Tīnuži - Koknese	49.8 km
P81	Bērzaune - Vestiena - Ērgļi	27.2 km
P82	Jaunkalsnava - Lubāna	56.6 km
P83	Lubāna - Dzelzava	23.9 km
P84	Madona - Varakļāni	49.1 km
P85	Rīgas HES - Jaunjelgava	56.9 km
P86	Sērene - Kalnieši	39.1 km
P87	Bauska - Aizkraukle	83.0 km
P88	Bauska - Linde	51.0 km
P89	Ķekava - Skaistkalne	55.7 km
P90	Rīgas HES - Pulkarne	2.3 km
P91	Mežvidi - Baldone	3.2 km
P92	Iecava - Stelpe	24.6 km
P93	Jelgava - Iecava	31.9 km
P94	Jelgava - Stalģene - Code	35.5 km
P95	Jelgava - Tērvete - Lithuanian border (Žagarē)	44.8 km
P96	Puri - Auce - Grīvaiši	79.0 km
P97	Jelgava - Dobeles - Annenieki	42.1 km
P98	Jelgava - Tukums	48.7 km
P99	Jelgava - Kalnciems	24.4 km
P100	Ozolnieki - Dalbe	7.7 km
P101	Kalnciems - Kūdra	11.6 km
P102	Dobeles - Jaunbērze	13.6 km
P103	Dobeles - Bauska	72.9 km
P104	Tukums - Auce - Lithuanian border (Vītiņi)	69.0 km
P105	Saldus - Ezere	34.2 km
P107	Skrunda - Ezere	37.0 km
P108	Ventspils - Kuldīga - Saldus	106.4 km
P109	Kandava - Saldus	52.6 km
P110	Liepāja - Tāši	10.6 km
P111	Ventspils - Grobiņa	95.6 km
P112	Kuldīga - Aizpute - Līči	68.6 km
P113	Grobiņa - Bārta - Rucava	51.8 km
P114	Priekule - Lithuanian border (Plūdoņi)	20.9 km
P115	Aizpute - Kalvene	17.2 km
P116	Kuldīga - Skrunda - Embūte	61.5 km
P117	Skrunda - Aizpute	26.8 km
P118	Kuldīgas apvedceļš	9.4 km
P119	Kuldīga - Alsunga - Jūrkalne	40.3 km
P120	Tāsi - Stende - Kuldīga	58.2 km
P121	Tukums - Kuldīga	82.2 km
P122	Ventspils - Piltene	24.0 km
P123	Zlēkas - Ugāle	26.5 km
P124	Ventspils - Kolka	75.4 km
P125	Tāsi - Dundaga - Mazirbe	58.4 km
P126	Valdgale - Roja	31.6 km
P127	Tāsi - Upesgrīva	34.3 km
P128	Sloka - Tāsi	73.8 km
P129	Talsu apvedceļš	6.7 km
P130	Līgas - Kandava - Veģi	28.0 km
P131	Tukums - Ķesteriems - Mērsrags - Kolka	107.7 km
P132	Rīga - Mārupe	9.1 km
P133	Lidostas "Rīga" pievedceļš (Rīga International Airport)	2.1 km

**Regional Roads**

Number	Route	Length (km)
P1	Rīga (Jaunciems) - Carnikava - Ādaži	16.5 km
P2	Juglas papīrfabrika - Upesciems	2.7 km
P3	Garkalne - Alauksts	92.8 km
P4	Rīga - Ērgļi	101.3 km
P5	Ulbroka - Ogre	26.0 km
P6	Saulkrasti - Sēja - Ragana	23.9 km
P7	Ragana - Turaida	9.8 km
P8	Inciems - Sigulda - Ķegums	72.3 km
P9	Ragana - Limbaži	38.9 km
P10	Inčukalns - Ropaži - Ikšķile	40.6 km
P11	Kocēni - Limbaži - Tūja	59.3 km
P12	Limbaži - Salacgrīva	44.6 km
P13	Limbaži - Aloja	31.6 km
P14	Umurga - Cēsis	39.3 km
P15	Ainaži - Matīši	60.3 km
P16	Valmiera - Matīši - Mazsalaca	45.3 km
P17	Valmiera - Rūjiena - Estonian border (Unguriņi)	55.9 km
P18	Valmiera - Smiltene	34.5 km
P19		
P20	Valmiera - Cēsis - Drabeši	39.9 km
P21	Rūjiena - Mazsalaca	21.5 km
P22	Valka - Rūjiena	51.2 km
P23	Valka - Vireši	48.0 km
P24	Smiltene - Valka	41.8 km
P25	Smiltene - Strenči	29.5 km
P26	Sedas pievedceļš	2.5 km
P27	Smiltene - Velēna - Gulbene	64.1 km
P28	Priekulji - Rauna	19.0 km
P29	Rauna (Vidzemes šoseja) - Drusti - Jaunpiebalga	32.0 km
P30	Cēsis - Vecpiebalga - Madona	86.5 km
P31	Ērgļi - Drabeši	52.5 km
P32	Līgatne (Vidzemes šoseja) - Skrīveri	73.2 km
P33	Ērgļi - Jaunpiebalga - Salņkrogs	61.2 km
P34	Sinole - Zeltiņi - Silakrogs	41.6 km
P35	Gulbene - Balvi - Vļaka - Russian border (Vientuļi)	69.5 km
P36	Rēzekne - Gulbene	87.2 km
P37	Pļaviņas (Gostiņi) - Madona - Gulbene	90.9 km
P38	Cesvaine - Velēna	37.6 km
P39	Alūksne - Estonian border (Ape)	30.3 km
P40	Alūksne - Zaiceva	25.0 km
P41	Alūksne - Liepna	33.0 km
P42	Vļaka - Zaiceva - Russian border (Pededze)	47.4 km
P43	Lītene - Alūksne	27.0 km
P44	Ilzene - Līzespasts	21.7 km
P45	Vļaka - Kārsava	53.1 km
P46	Dubļeva - Cērpene	22.8 km
P47	Balvi - Kapūne	24.0 km
P48	Kārsava - Tilža - Dubļukalns	47.8 km
P49	Kārsava - Ludza - Ezernieki	75.9 km
P50	Kārsava - Russian border (Aizgārša)	15.2 km
P51		
P52	Zīlupe - Šķaune - Ezernieki	59.2 km
P53		
P54	Rēzekne - Greiškani	6.7 km
P55	Rēzekne - Dagda	58.0 km
P56	Malta - Kaunata	27.3 km
P57	Malta - Sloboda	36.5 km
P58	Vijāni - Preiļi - Spoģi	62.4 km
P59	Vijāni - Ružiņa - Malta	28.9 km
P60	Dagda - Aglona	35.3 km
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P62	Krāslava - Preiļi - Madona	141.8 km
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P72	Ilūkste - Bebrene - Birži	68.0 km
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P75	Jēkabpils - Lithuanian border (Nereta)	60.6 km
P76	Aizkraukle - Jēkabpils	46.0 km
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P83	Lubāna - Dzelzava	23.9 km
P84	Madona - Varakļāni	49.1 km
P85	Rīgas HES - Jaunjelgava	56.9 km
P86	Sērene - Kalnieši	39.1 km
P87	Bauska - Aizkraukle	83.0 km
P88	Bauska - Linde	51.0 km
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P90	Rīgas HES - Pulkarne	2.3 km
P91	Mežvidi - Baldone	3.2 km
P92	Iecava - Stelpe	24.6 km
P93	Jelgava - Iecava	31.9 km
P94	Jelgava - Staļģene - Code	35.5 km
P95	Jelgava - Tērvete - Lithuanian border (Žagarē)	44.8 km
P96	Puri - Auce - Grīvaiši	79.0 km
P97	Jelgava - Dobeles - Annenieki	42.1 km
P98	Jelgava - Tukums	48.7 km
P99	Jelgava - Kalnciems	24.4 km
P100	Ozolnieki - Dalbe	7.7 km
P101	Kalnciems - Kūdra	11.6 km
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P104	Tukums - Auce - Lithuanian border (Vītiņi)	69.0 km
P105	Saldus - Ezere	34.2 km
P107	Skrunda - Ezere	37.0 km
P108	Ventspils - Kuldīga - Saldus	106.4 km
P109	Kandava - Saldus	52.6 km
P110	Liepāja - Tāši	10.6 km
P111	Ventspils - Grobiņa	95.6 km
P112	Kuldīga - Aizpute - Līči	68.6 km
P113	Grobiņa - Bārta - Rucava	51.8 km
P114	Priekule - Lithuanian border (Plūdoņi)	20.9 km
P115	Aizpute - Kalvene	17.2 km
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P119	Kuldīga - Alsunga - Jūrkalne	40.3 km
P120	Tāsi - Stende - Kuldīga	58.2 km
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P123	Zlēkas - Ugāle	26.5 km
P124	Ventspils - Kolka	75.4 km
P125	Tāsi - Dundaga - Mazirbe	58.4 km
P126	Valdgale - Roja	31.6 km
P127	Tāsi - Upesgrīva	34.3 km
P128	Sloka - Tāsi	73.8 km
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P130	Līgas - Kandava - Veģi	28.0 km
P131	Tukums - Ķesterciems - Mērsrags - Kolka	107.7 km
P132	Rīga - Mārupe	9.1 km
P133	Lidostas "Rīga" pievedceļš (Rīga International Airport)	2.1 km

## Summary

The previous information is broken down by category that can be serviced by the MU.

	km	Total km
<b>Main Roads</b>		<b>7151</b>
State main state roads	1674	
State regional roads	4372	
Municipal roads	1105	
<b>City/Town Roads</b>		<b>7244</b>
Local state roads	2697	
Streets	4547	
<b>Gravel Roads</b>		<b>44178</b>
State	11350	
Municipal roads	29388	
Municipal streets	3440	
<b>Annual Construction</b>		<b>0</b>
Reconstruction / New asphalt	TBD	
New roads	TBD	

For budgeting purposes, we will base income calculations on servicing:

- 1,500 km main roads
- 1,500 km city/town roads
- 1,500 gravel roads



## 8 MANAGEMENT and KEY PERSONNEL

### 8.1 Structure

A management committee for the JV would be set up to include:

- a **GoodPointe Technology** management representative
- a **GoodPointe Technology** Project Manager
- the JV General Manager / Technical Partners management representative.
- the JV Project Manager
- a representative of the investor and/or strategic partner

The management committee would be chaired by the JV General Manager.

### 8.2 Key Personnel

for **Dahlgren Corp** (USA)

Darwin Dahlgren, CEO, **Dahlgren Corp**, **GoodPointe Technology** <http://www.goodpointe.com/>

Anthony J. Kadlec, President, **GoodPointe Technology** <http://www.goodpointe.com/>

for **Technical Partners International Inc.** (Canada) / "**TP Riga**" SIA (Latvia) - [www.tpriga.lv](http://www.tpriga.lv)

Ed Kalvins – Owner / Project Director. BSc - Chemical Engineering (University of Toronto, Canada) 40 years of Project Management, Manufacturing Management and Engineering Management experience in Canada and Latvia. Ed is nominated as the JV General Manager.

Guna Skangale, Project Manager MSc – Riga Technical University, experienced road construction engineer and manager. Guna is nominated as the JV Project Manager.

Rolands Kromanis, Project Engineer - PhD candidate in the civil engineering program at the University of Exeter, UK. He has received a Bachelor's degree in Civil and Structural Engineering (the University of Bradford, UK, 2008) and completed a Master's of Science in Structural Engineering (the University of Dundee, UK, 2009). In 2011 he joined the University of Exeter. His PhD is focused on the structural performance evaluation of bridges using measurements from continuous monitoring. He is also a practicing structural engineer involved in engineering consultancy and energy-efficient housing projects in Europe. Technical specialist.

Alvis Līdums – BA – Economics – Manufacturing, BA – Business Administration, MA – Public Administration (University of Latvia). Project Manager. Industrial Engineering and Project Management experience. Technical specialist.

Ints Narkēvičs – Project Coordinator, Operations Supervisor.

Anita Boldane – BA - Economics (University of Rezekne, Latvia). EU certificate in Project Management. Project Group Manager. Engineering services specialist. Project coordination with municipal institutions.

Indra Sproge-Kalvina - BA - Management Studies (University of Latvia). Sales and customer service specialist.

It is expected that TP personnel will be involved on a contract basis depending on need. Most will not be fully involved in the project but utilized where and when their experience is required.

### 8.3 Personnel

#### GPSVision - Annual Projections

	Annual (€)												Total Year	exchange t 1.1328
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
<b>Salaries - Staff</b>	<b>19,300</b>	<b>19,300</b>	<b>19,300</b>	<b>19,300</b>	<b>19,300</b>	<b>19,300</b>	<b>19,300</b>	<b>19,300</b>	<b>19,300</b>	<b>19,300</b>	<b>19,300</b>	<b>19,300</b>	<b>231,600</b>	
<b>Management / Vadība - lv</b>														
General Manager / Sales Manager	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	72,000	\$81,561
Project Manager	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	60,000	\$67,968
Project Engineer	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	48,000	\$54,374
Operator	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	36,000	\$40,781
Secretary	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	12,000	\$13,594
Bookkeeper	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	3,600	\$4,078

	Annual (€)												Total Year	exchange t 1.1328
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
<b>Salaries / Expenses US</b>	<b>27,000</b>	<b>27,000</b>	<b>27,000</b>	<b>27,000</b>	<b>27,000</b>	<b>27,000</b>	<b>27,000</b>	<b>27,000</b>	<b>27,000</b>	<b>27,000</b>	<b>27,000</b>	<b>27,000</b>	<b>324,000</b>	
<b>Management / Vadība US</b>														
Project Manager (US)	7,000.00	7,000.00	7,000.00	7,000.00	7,000.00	7,000.00	7,000.00	7,000.00	7,000.00	7,000.00	7,000.00	7,000.00	84,000	\$95,155
Project Engineer (US)	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	72,000	\$81,561
Other personnel costs (US)	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	120,000	\$135,936
Travel	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	24,000	\$27,187
Accommodation	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	24,000	\$27,187

## 9 DEVELOPMENT and EXIT PLANS

### 9.1 Objective

The objective of this project is to develop a business based on infrastructure management services provided by the **Dahlgren Corp** and supported by **Technical Partners** through a JV based in Latvia.

### 9.2 Development

The mobile unit has been developed by the **Dahlgren Corp and its affiliated companies**. The objective now is to use the MU in Latvia and/or the Baltic States.

**Technical Partners** will work closely with the **Dahlgren Corp** to set up sustainable operation and service clients of the JV.

The surveying capacity of the MU will be offered on a per km fee basis along with services related to setting up the maintenance program and its administration. The MU may also be offered for sale, but it is expected that this will be difficult in the current economic climate. The client will also be offered licensing contracts with which to perform the required maintenance administration work, but it is expected that the clients will elect to use the services of the JV because of cost considerations and size of jurisdiction.

Services will be offered in the Baltic region concentrating on Latvia, Lithuania and Estonia, but will be expanded to other regional countries, and other EU countries requiring the same services.

### 9.3 Exit plan

Once the business has been established, it could be sold off to roads maintenance services company. However, the intention is develop the business.

### 9.4 SWOT Analysis

#### 1. Strengths

- The **Dahlgren Corp** has the technology and expertise to use it
- the fact that the **Dahlgren Corp** has already implemented the MU and can demonstrate working units.
- technical capabilities both at the **Dahlgren Corp** of the US and with TP in Latvia.
- relatively low operating costs
- relatively low wage rates in Latvia.
- TP network in government and with the municipalities

#### 2. Weaknesses

- finances
- regulations currently not known

#### 3. Opportunity

- unique concept
- no established service providers

#### 4. Threats

- other competition
- budget restraints for clients because of economic or geopolitical considerations

## 10 FINANCES FIRST PROJECT

For purposes of project planning, we will assume that six months is required to prepare the first MU and to acquire clients. Hence no sales are expected in this period. This could change based on equipment lead times and discussions with municipalities.

### 10.1 Use of Funds

#### 10.1.1 Capital Budget

	1 Mobile Unit Cost \$	1 Mobile Unit Cost €
<b>Capital Purchases / Kapitāla iepirkumi</b>		
Exchange (Euro to USD) 09.02.2015	1.1327979	
Exchange (USD to Euro) 09.02.2015	0.88277	
<b>Capital Costs</b>		
01 Mobile Data Center (2)	4,668	4,121
02 Positioning System	149,250	131,753
03 Point Laser System	\$45,652	€40,300
04 Line Laser System (2)	\$56,530	€49,903
05 Base Station Positioning	\$21,839	€19,279
06 Optical Stereo Pair Camera (5)	\$117,914	€104,091
07 Infrared Camera (IC) (2)	\$41,718	€36,827
08 Non-Stereo Fixed Survey (2)	\$22,557	€19,913
09 Non-Stereo Adjustable	\$22,943	€20,253
10 OSPC Mounting Systems	\$6,526	€5,761
11 IC Mounting Systems	\$6,377	€5,629
12 NFSC Mounting System	\$3,190	€2,816
13 NASC Mounting System	\$2,256	€1,992
14 Point and Line Mounting	\$5,707	€5,038
15 External Vehicle OSPC (2)	\$10,680	€9,428
16 Power Center (2)	\$50,774	€44,822
17 System and Console	\$149,999	€132,415
18 Front Capture Lighting	\$1,630	€1,439
19 Rear Capture Lighting	\$2,246	€1,983
20 Warning Lighting System	\$1,569	€1,385
21 Auxiliary Cooling System	\$2,895	€2,556
22 Hi-Rail System	\$8,300	€7,327
23 Radio Communication	\$2,200	€1,942
24 System Calibration	\$31,590	€27,887
TOTAL equipment	\$769,010	€678,859
Vehicle	\$35,000	€30,897
Freight	\$6,000	€5,297
Insurance	\$9,000	€7,945
		€0
TOTAL equipment	\$819,010	€722,997
Contingency @10%	\$81,901	€72,300
TOTAL equipment costs	\$900,911	€795,297
<b>BUDGET EQUIPMENT CAPITAL</b>	\$900,911	€795,297

#### 10.1.2 Equipment maintenance Budget

Annual maintenance costs	\$25,000	€22,069
		€0
TOTAL	\$25,000	€22,069
Contingency @10%	€2,500	€2,207
TOTAL operating costs	\$27,500	€24,276

### 10.1.3 Office Capital

Office Capital	<b>10,300</b>
Microsoft Project Manager Program (3)	<b>1,350</b>
Desk computer (3)	-
Apple Computers (3)	<b>4,800</b>
Monitors (3)	<b>300</b>
Microsoft Office (3)	<b>750</b>
Potocopier	<b>500</b>
Desk sets (4)	<b>1,000</b>
Chairs (4)	<b>600</b>
Book shelves	<b>1,000</b>

### 10.1.4 Personnel costs

see section 8.3

## 10.2 Sources of Income

### 10.2.1 Overall

Euro	5 Year Sales Forecast (€)				
	Year 1 (6m)	Year 2	Year 3	Year 4	Year 5
<b>Services Income / Ienākumi</b>	<b>0</b>	<b>1,779,664</b>	<b>2,597,992</b>	<b>3,416,320</b>	<b>4,234,648</b>
Data Collection	-	1,191,740	1,191,740	1,191,740	1,191,740
Maintenance Program Development	-	357,522	715,044	1,072,566	1,430,087
Maintenance Program Administration	-	230,403	691,209	1,152,015	1,612,821

### 10.2.2 Annual Income from basic data collection services

Annual Income from basic data collection services	Cost per km			Total
	Main state roads	City/Town Roads	Gravel roads	
km	1,500	1,500	1,500	
Income	€331,039	€397,247	€463,454	€1,191,740

### 10.2.3 Annual Income Basic Services including pavement thickness

Annual Income Basic Services including pavement thickness	Cost per km			Total
	Main state roads	City/Town Roads	Gravel roads	
km	1,500	1,500	n/a	
Income	€450,213	€516,420	n/a	€966,633

### 10.2.4 Income from pavement thickness measurement services

TBD – cannot be estimated at this time.

Income from pavement thickness measurement services	Cost per km		
	Main state roads	City/Town Roads	Gravel roads
Data collection	\$200	\$200	n/a
Data collection	€177	€177	n/a

### 10.2.5 Annual Income from Maintenance program development

Annual Income from Maintenance program development	Cost per km			Total
	Main state roads	City/Town Roads	Gravel roads	
km	1,500	1,500	1,500	
Income	€158,899	€132,416	€66,208	€357,522

### 10.2.6 Annual Income from Maintenance program administration services

Annual Income from Maintenance program administration services	Cost per km			Total
	Main state roads	City/Town Roads	Gravel roads	
km	1,500	1,500	1,500	
Income	€153,602	€153,602	€153,602	€460,806

### 10.2.7 Additional Services for Maintenance program development

For budgeting purposes, this is not predicted since it will depend on client requirements. This will be extra income.

### 10.2.8 Additional Services for Maintenance program administration

For budgeting purposes, this is not predicted since it will depend on client requirements. This will be extra income.

## 10.3 Financial Forecasts

### 10.3.1 Start-up Period

GPSVision - Annual Projections

	Year 1 (€) (Six Months - Start-up)												Total Year
	0	0	0	0	0	0	1	2	3	4	5	6	
<b>Income</b>													
<b>Services Income / Ienākumi</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
Capital In or Loans	-	-	-	-	-	-	100,000	350,000	50,000	350,000	50,000	350,000	1,250,000
Capital In or Loans repaid	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Income</b>	-	-	-	-	-	-	100,000	350,000	50,000	350,000	50,000	350,000	1,250,000
<b>Capital Purchases / Kapitāla Iepirkumi</b>	-	-	-	-	-	-	10,300	265,099	-	265,099	-	265,099	805,597
<b>Expenses / Izdevumi</b>													
<b>Personel</b>													
Salaries & Personnel Expenses Iv / Atalgojums	-	-	-	-	-	-	19,300	19,300	19,300	19,300	19,300	19,300	115,800
US Expenses	-	-	-	-	-	-	27,000	27,000	27,000	27,000	27,000	27,000	162,000
Commissions on Sales	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Costs	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Office / Birojs</b>													
- Rent / Ire	-	-	-	-	-	-	740	740	740	740	800	800	4,560
- Maintenance Costs / Uzturēšana	-	-	-	-	-	-	225	225	225	225	225	225	1,350
- Communications / Sakari	-	-	-	-	-	-	190	190	190	190	190	190	1,140
- Subscriptions / Abonementi	-	-	-	-	-	-	48	48	48	48	48	48	288
- Office supplies / Biroja Izdevumi	-	-	-	-	-	-	35	35	35	35	35	35	210
- Bank Charges and Fees	-	-	-	-	-	-	50	50	50	50	50	50	300
- Legal fees	-	-	-	-	-	-	500	500	500	1,000	1,000	1,000	4,500
- Company car expenses - downpayments on leasing	-	-	-	-	-	-	4,500	-	-	-	-	-	4,500
- Transportation costs/ transporta izmaksas	-	-	-	-	-	-	1,900	1,900	1,900	1,900	1,900	1,900	11,400
Unanticipated / Neparedzētie izdevumi	-	-	-	-	-	-	500	500	500	500	500	500	3,000
<b>Marketing / Marketings</b>	-	-	-	-	-	-	925	825	825	825	825	1,025	5,250
<b>Financing Fees</b>	-	-	-	-	-	-	5,000	17,500	2,500	17,500	2,500	17,500	62,500
Interest Expenses / Procenti par aizdevumu	-	-	-	-	-	-	1,250	5,625	6,250	10,625	11,250	15,625	50,625
<b>Total Overhead</b>	-	-	-	-	-	-	62,163	74,438	60,063	79,938	65,623	85,198	427,423
<b>Total Cash Out</b>	-	-	-	-	-	-	72,463	339,537	60,063	345,037	65,623	350,297	1,233,020
<b>Surplus / Defecit</b>													
Cash Flow	-	-	-	-	-	-	27,537	10,463	- 10,063	4,963	- 15,623	- 297	16,980
Opening Balance	-	-	-	-	-	-	-	27,537	38,000	27,937	32,900	17,277	
Closing Balance	-	-	-	-	-	-	27,537	38,000	27,937	32,900	17,277	16,980	

10.3.2 Five year projections

Infrastructure Management - Annual Projections

	5 Year Forecast (€)				
	Year 1 (6m)	Year 2	Year 3	Year 4	Year 5
<b>Income</b>					
<b>Services Income / Ienākumi</b>	0	1,779,664	2,240,470	2,701,276	3,162,082
Capital In or Loans	1,250,000	0			
Capital In or Loans repaid	-	-500,000	-750,000	0	0
<b>Total Income</b>	<b>1,250,000</b>	<b>1,279,664</b>	<b>1,490,470</b>	<b>2,701,276</b>	<b>3,162,082</b>
<b>Capital Purchases / Kapitāla Iepirkumi</b>	<b>805,597</b>	-	-	-	-
<b>Expenses / Izdevumi</b>					
<b>Personel</b>					
Salaries & Personnel Expenses lv / Atalgojums	115,800	231,900	231,900	231,900	231,900
US Expenses	162,000	324,000	324,000	324,000	324,000
Commissions on Sales	-	355,933	448,094	540,255	632,416
Operating Costs	-	42,226	42,226	42,226	42,226
<b>Office / Birojs</b>					
- Rent / Ire	4,560	9,240	9,240	9,240	9,240
- Maintenance Costs / Uzturēšana	1,350	2,700	2,700	2,700	2,700
- Communications / Sakari	1,140	2,280	2,280	2,280	2,280
- Subscriptions / Abonementi	288	576	576	576	576
- Office supplies / Biroja Izdevumi	210	420	420	420	420
- Bank Charges and Fees	300	600	600	600	600
- Legal fees	4,500	7,500	7,500	7,500	7,500
- Company car expenses - downpayments on leasing					
- Transportation costs/ transporta izmaksas	11,400	22,800	22,800	22,800	22,800
Unanticipated / Neparedzētie izdevumi	3,000	6,000	6,000	6,000	6,000
<b>Marketing / Marketings</b>	<b>5,250</b>	<b>11,450</b>	<b>11,450</b>	<b>11,450</b>	<b>11,450</b>
<b>Financing Fees</b>	<b>62,500</b>	-	-	-	-
<b>Interest Expenses / Procenti par aizdevumu</b>	<b>50,625</b>	<b>187,500</b>	<b>75,000</b>	<b>75,000</b>	<b>0</b>
<b>Total Overhead</b>	<b>422,923</b>	<b>1,205,125</b>	<b>1,184,786</b>	<b>1,276,947</b>	<b>1,294,109</b>
<b>Total Cash Out</b>	<b>1,228,520</b>	<b>1,205,125</b>	<b>1,184,786</b>	<b>1,276,947</b>	<b>1,294,109</b>
<b>Surplus / Defecit</b>	<b>21,480</b>	<b>74,539</b>	<b>305,684</b>	<b>1,424,329</b>	<b>1,867,974</b>
Cash Flow	21,480	74,539	305,684	1,424,329	1,867,974
Opening Balance	-	21,480	96,019	401,703	1,826,032
Closing Balance	<b>21,480</b>	<b>96,019</b>	<b>401,703</b>	<b>1,826,032</b>	<b>3,694,005</b>

The project is expected to pay back in year three after start-up.

Note: Income calculations are based on basic services and do not includes items such as pavement measurement services and additional services identified in 7.3.2 and 7.3.3.