Business Plan

TMS (Travelling Messaging System)
Service Delivery Platform

-Peter Lindberg - Mattias Hansson -

1 Background – InnoTel's service TMS (Travelling Messaging System)

InnoTel's business concept is designed to offer the corporate market innovative OTT (Over The Top) based telephony and messaging services that challenge the traditional mobile carriers with innovative edge, price and quality. Innotel belongs to the second wave of mobile service providers who operates globally without ownership or rented capacity, free to compete directly with the traditional operators on specific call types with innovative up-to-date global Technologies.

With InnoTel's patented OTT-based messaging technology TMS (Traveling Messaging System), global logistics companies and vehicle manufacturers are able to halve their communications costs and in addition enhance the communication quality and reliability in their cloud services. The TMS technology is more reliable and cost-effective compared with legacy technologies such as SMS and Mobile Data services that are used today. TMS has also a large scaled market potential in a number of applications areas:
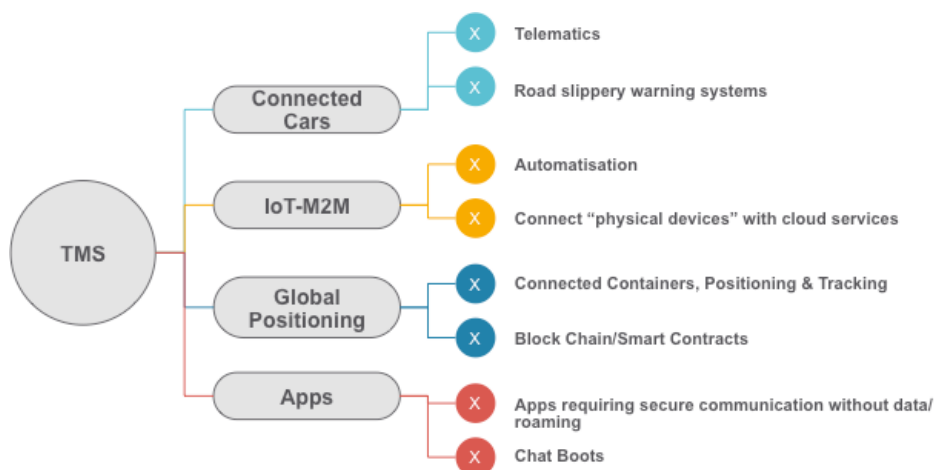

Figure 1: TMS application areas

Needs, key drivers buying and user personas

The main concern that International companies stands in front of today with their current mobile telephony solutions are:

> ➤ Today's mobile telephony and messaging services are procured locally with each national mobile carrier, which drives variable call costs. For this reason, International companies requires unified cost-effective global OTT based telephony and messaging services in order to decrease cost of roaming.

E.g. Volvo Cars (VCC) - Volvo On Call cloud service that since many year back supplies + 300,000 connected cars. The service allows the driver to stear functions from a mobile app (turn on the heat or cold, etc.) and to receive real-time vehicle data about (location, fuel

consumption, car service etc.). InnoTel recognized during several meetings with VCC, a number of issues that were identified and discussed within the frame of **Volvo ON Cal**l:

➢ High fees, VCC pays approx 288 MSEK/year (about 300 000st connected cars), and pays solely for each mobile subscription (80 SEK / month / SIM card) deployed in each car. When a car drives across country borders additional costs of SMS and data roaming increases.

➢ Not sufficiently reliable: On Call uses SMS (a technology with doubtful latency/ deliverability) and mobile data (GPRS / 3/4G that also have rather bad deliverability when the car is exposed to weak radio coverage.

➢ Complex logistic supply for VCC, with different mobile carrier subscription procurement is dependable of which market the car is delivered. Telenor (EU), Verizon (US), China Unicom (China), Claro Mobile (Brazil), Telstra (Australia) dependable on geographic markets.

1.1 The technology behind the TMS Innovation

Messages are sent via the current 3G/4G global networks without data connection, fast and reliable without any need of roaming data. This new way of sending tracking data to a location with no use of traditional communication is fully functional with implementation of algorithms that will execute predefined commands using phone calls in a end-to-end direction, i.e. "give me information about the temperature status" in a sea container or a car. E.g., a container calls different predefined virtual numbers in TMS switch, the call hung-up before taken/received and the SIM-card in the container or the car will never be debited any "data".
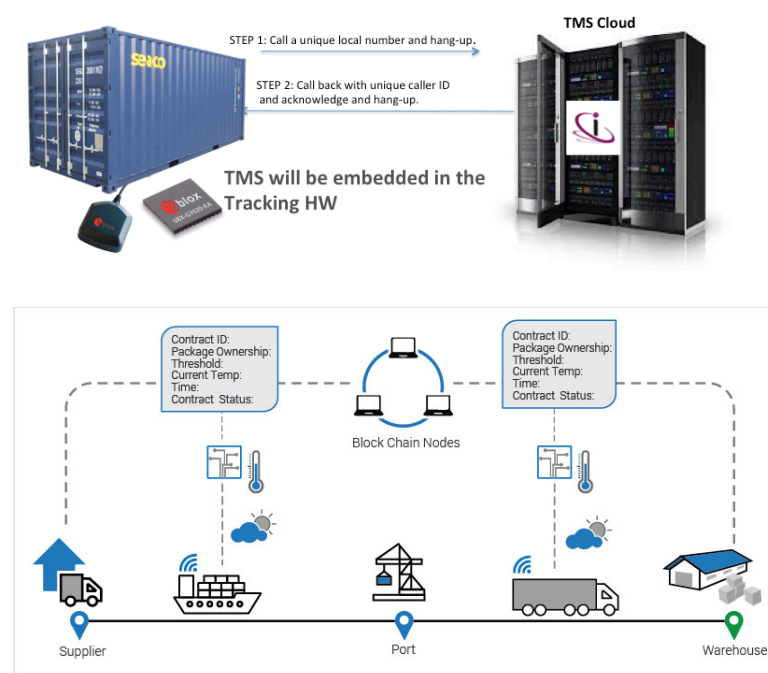

Figure 2: TMS Switch in the Logistic Chain

The TMS technology takes in a new way advantage of the signaling channel in the mobile network system to set up a call / message for communicating between the container or the vehicle and the service center / cloud. The container or vehicle is encoded with its own ID and specified message that is meant to send to the cloud and register this as the calling number. On a similar way, one can communicate back to the container or the vehicle. With the TMS technology, several compression techniques for processing data are used, including those used in 6LoWPAN header compression and general based on dictionaries, like Liz-Lempel.
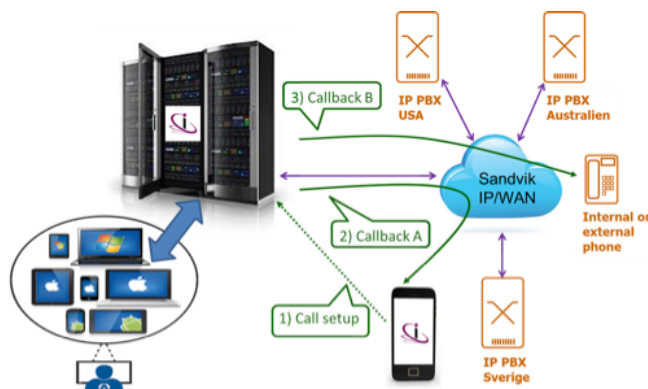

Figure 3: TMS communication logic

These compression approaches are compared with the table-based lookup of codes *) See figure 4) which is effective for predefined messages. A message is thus always associated with an event, e.g., an engine failure or positioning deviation. Such a message may be followed by more messages encoding e.g. position in an accident. Dynamic data, such vehicle position, in turn can be efficiently encoded (including by context, e.g. dependent on previous vehicle position or identity in either CID field or via a dynamic selection of one or more phone call to the Cloud. TMS technology can thus be driven two-way so that a cloud service calls up a car, and depending on the "Caller ID" that appears, one can just simply ask questions or turn on or off various functions.

	AutoId [PK] bigint	CallerId text	Ident1 text	Ident2 text	Ident3 text	Ident4 text	Ident5 text	Ident6 text	Ident7 text	Ident8 text	Lat double precision	Long double precision	TimeAdd timestamp without time zone	LastUpdate timestamp without time zone	Finished boolean	Radius double precision
1	42	0038971396160	25	6	173	64	12	126	86	224	41.9867968	20.9406368	2017-01-12 17:09:20.119005	2017-01-12 17:11:24.656426	TRUE	0
2	45	0038971396160	25	6	170	64	12	126	132	96	41.98672	20.9618016	2017-01-12 17:16:43.822793	2017-01-12 17:18:49.182537	TRUE	0
3	46	0038971396160	25	6	168	192	12	126	157	48	41.9866816	20.9624368	2017-01-12 17:24:08.284565	2017-01-12 17:26:14.550036	TRUE	0
4	47	0038971396160	25	6	174	160	12	126	121	240	41.986832	20.9615344	2017-01-12 17:31:32.717515	2017-01-12 17:33:38.697855	TRUE	0
5	49	0038971396160	25	6	174	0	12	126	102	48	41.986816	20.9610288	2017-01-16 08:45:50.511834	2017-01-16 08:47:56.473543	TRUE	0
6	51	0038971396160	25	6	175	0	12	126	96	192	41.9868416	20.9408896	2017-01-17 14:18:19.346816	2017-01-17 14:20:25.177754	TRUE	0
7	52	0038971396160	25	6	176	0	12	126	95	240	41.9868672	20.9408688	2017-01-17 14:22:04.06654	2017-01-17 14:26:00.517012	TRUE	0
8	53	0038971396160	25	6	173	0	12	126	95	16	41.9867904	20.9408464	2017-01-17 14:31:19.566735	2017-01-17 14:33:25.384297	TRUE	0
9	54	0038971396160	25	6	172	160	12	126	93	240	41.9867808	20.9408176	2017-01-17 14:38:43.768414	2017-01-17 14:40:49.827675	TRUE	0
10	55	0038971396160	25	6	171	160	12	126	94	32	41.9867552	20.9408224	2017-01-17 14:46:08.522956	2017-01-17 14:48:14.59918	TRUE	0
11	56	0038971396160	25	8	212	96	12	127	32	96	42.0009056	20.9657952	2017-01-23 19:20:38.687709	2017-01-23 19:22:39.003034	TRUE	0

Figure 4: Table-based lookup of codes

A new registration is added for each call, filling in all the values one by one for each ID separately. The hardware is programmed so that the majority of the given values such as longitude and latitude could be sent;

```
USB.print("La4: ");
numberToCall(Lat[0]);
USB.print(" - ");
USB.println(Lat[0]);
makeCall();
```
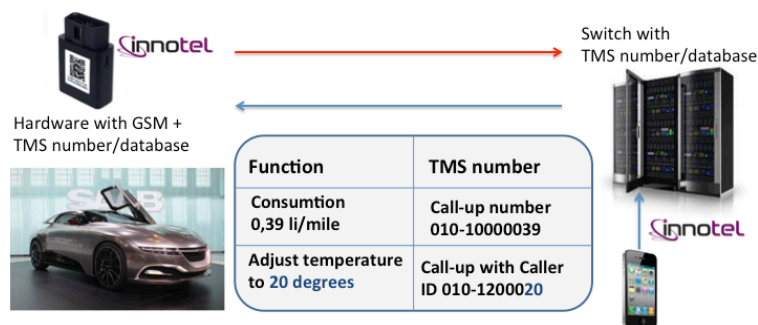

Figure 5: longitude and latitude positioning

To visualize this, InnoTel has developed a simple responsive designed web GUI that displays the current position of the container or vehicle on a map.

1.2 Additional advantages with TMS

InnoTel aims also to offer its own global SIM card optimized for TMS in order to simplify logistics among sea container carriers and automotive manufacturers such as VCC.

Figure 6: Key advantages of TMS

2 Vision

InnoTel's vision is with TMS technology is to become a defacto standard for reliable cost-efficient communication in a number of domains, such as global positioning services, connected vehicles, M2M / IoT services, but also for applications that needs to communicate without a data connection, such as smart metering (electricity, gas, water, air/pollution etc.).

3 Business Model

InnoTels business model is designed and fitted to the very positive emergence and growth of global OTT services that quickly has gained a massive proliferation:

➢ **WhatsApp** has quickly in short time reached 100 million users worldwide for its messaging service, a free alternative to SMS, and in many countries completely played-out mobile carriers SMS services (in Spain, 92 % of mobile subscribers use WhatsApp)
➢ **Skype and Viber** have both in short time reached over 300 million users. This mobile VoIP service are used by a lot of individuals who want to make free calls worldwide.
➢ **Netflix** has quickly challenged the traditional TV/Media industry.

Benefits with OTT:

➢ OTT services can be used regardless of which mobile carrier the company is contracting. OTT services are like a tasty "sandwich applied ingredient" where the mobile carrier is the bread.
➢ Country Unlimited with OTT services you can make cheap and stable calls to anyone in the world. *Mobile carrier' presence are often geographically limited to one country in which they promote their SIM cards and services.*

➢ OTT services can be promoted online, and allows the end customer to directly sign up for the service.
➢ OTT services can be spread out through word of mouth.

4 The business model - building blocks

InnoTels's business model for the TMS service is aligned to the identified corporate customer needs on the target market. According to (Ovum Research 2017), in 2020 it is estimated to be 2.6 billion unique monthly active users of OTT communication apps, which will generate approx. 47.7 trillion text messages. As outlined below, descriptions about the critical success factors within each block will be examined.

4.1 Key partners

Thanks to our unique industrial network of market contacts, InnoTel has already been able to initiate contacts with both potential strategic key partners and prospective direct buying customers:

Global OEMs in embedded systems such as ArcCore , 2N Telecom and the Cargo Tracking e.g Maersk

Partners in call termination and local phone numbers such as TDC, Voxbone

Logistics companies such as Schenker, DHL, UPS

Vehicle manufacturers like Volvo Cars, AB Volvo, Scania, NEVS, BMW, Mercedes, VW
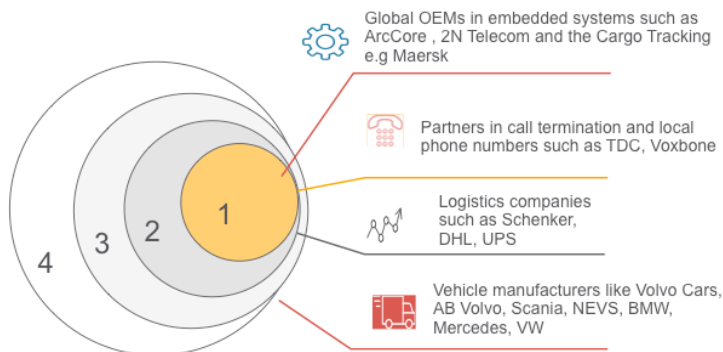
Figure 7: Strategic key partners

4.2 Key activities

The key activities that is required to package and deliver InnoTels value proposition toward the target audience includes both product and software development:

Step 4: Go-2-Market in prioritized segments

Step 3: Licensing / SLA development of Beta, APIs SDK against OEMs

Step 2: Partner and strategy development of prototype development

Step 1: Development, conceptualization and demo for POC
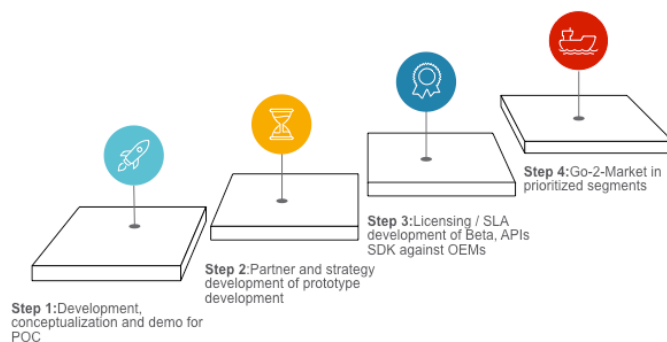
Figure 8: Key activities

4.3 Key resources

The most required and critical cost driven resources to develop and deliver TMS are both systems and business developers, which continuously develops the platform consisting of:

PBX with local numbers

GPS/3G hardware with implemented TMS software

Development of API:s hardwaredevelopment /app development

Businessdeveloper cargo tracking, connected cars/IoT,
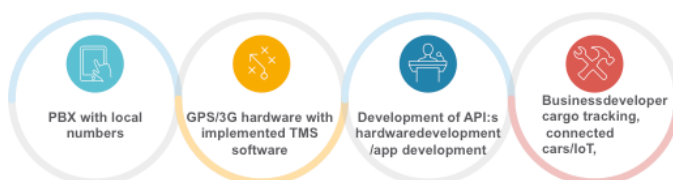
Figure 9: Key resources required

4.4 Value proposition

The unique value of InnoTels offering is dataless reliable OTT based messaging services for cargo tracking and connected cars, where the unique TMS technology for dataless communication delivers the needs of both lower prices and enhanced global reliability and quality in comparison to today's legacy technologies based on SMS and Mobile data (GPRS / 3-4g), which forcing the car manufacturer or logistics company to negotiate with a specific mobile carrier in each country. The TMS technology can quickly be scaled up globally. The innovation behind the TMS service is also patented (Patent No. 1451462-4).

Figure 10: InnoTels value proposition
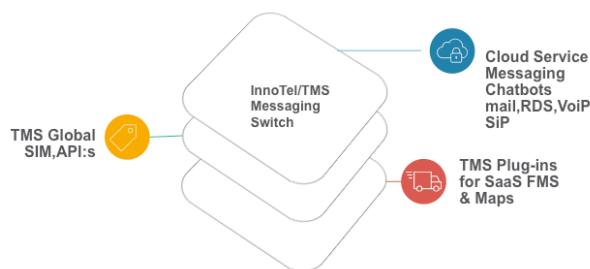
Figure 11: The value proposition is communicated out of the following fundamental elements:
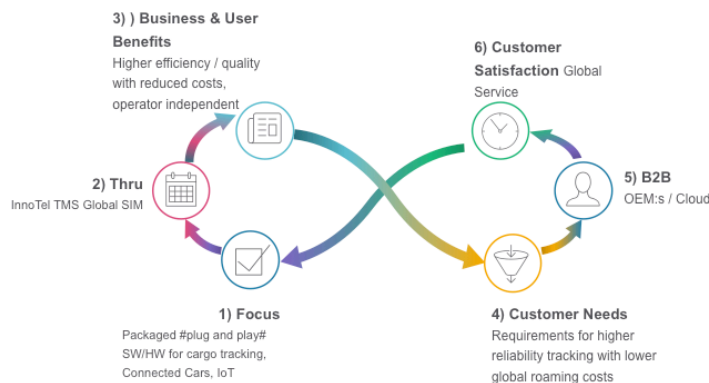
InnoTels value proposition will also provide API´s, which can be integrated with generically with:

➢ IoT / Cloud platforms and different kinds of standard hardware.

➢ TMS will also eventually be offered as a separate SaaS Fleet Management service with its own SIM card. The advantage is that TMS then could be offered as a custom turnkey solution that powerfully decreases the cost vs. current services.

➢ InnoTel anticipates that there is a development investment requirement with an estimation of 4-6 million SEK. The predicted and estimated time is 12 months to develop a beta product, preferably together with one pilot customer partner.

4.5 Revenues

The pricing and earnings are based on the customer value and volume-based, flat rate prices per connected container and vehicle including software and hardware. The pricing model will be similar to the mobile carriers pricing of mobile data and SMS, but very competitive and in most cases offered with global fixed-price subscriptions.

Where applicable, when TMS customized hardware configuration is used against Cargo Tracking and connected cars, billing is done separately case by case.

➢ Targeting the automotive manufacturers, a TMS SIM card package will be offered for 40 SEK / month compared with VCC's 80 SEK / month. TMS will also be integrated with applicable hardware via API´s.

Targeting the container shipment companies who requires to positioning their containers when they are shipped from the UK to Hong Kong, InnoTel will offer a packaged tracking service with an embedded SIM card +TMS service with tracking software for $ 75 / month, compared with 150 USD / month of what is paid today when GPRS is used.

➢ When InnoTel is licensing the technology to other players, hardware vendors and app developers, a license fee per hardware or per app user will be applied.

4.6 Distribution channels

SaaS available service in the carmaker's own cloud service provided that the TMS software is integrated into the carmaker's OBD2

Paid subscribers, packaged hard and software delivered and activated via InnoTels cloud service

SDK with SLA´s against platforms for embedded systems e.g ArcCore

OEM cooperation with mobile carriers so they get a better service compared with SMS and Mobile Data for Global Tracking

Figure 12: InnoTels key distribution channels

The enhanced grade of rivalry and potential market entry barriers may result in that mobile carriers might be compelled to block the TMS technology as their own position in the value chain is challenged, also happened to the game changers Skype and Viber. These circumstances can be circumvented by seeking cooperation with mobile carries, by giving them access to better value-added services compared with text messaging and mobile data, which today have certain failings in global tracking reliability.

4.7 Customer segments

The customer segmentation is need-based, with priority during Q1-Q2 2017 by targeting the global tracking segment of shipping customers who on a daily basis are positioning their cargo containers when they are shipped between Europe and Asia with very high roaming charges. Container companies pays often 150 USD / month for a SIM card with flat rate data used in global sea routes between e.g. the UK and Hong Kong.
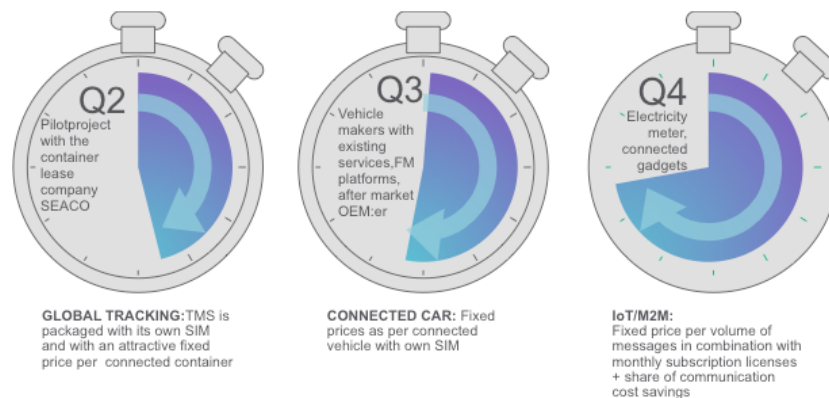
Figure 13: InnoTels customer segmentation

During Q3 / Q4, InnoTel shall approach the connected cars segment and also selectively choose industries for connected gadgets (IoT), where the potential for robust revenues are expected to be high.

4.8 Costs (drivers)

The most cost-intensive resources in TMS PLC (product life cycle) are:

➢ System development of TMS, integration with existing hardware devices and development of APIs.

Marketing / Business Development resources to process, develop and build the customer / user base, primarily in the Cargo Tracking segment.

3   Risk analysis

There are of course elements of risks that can affect InnoTels opportunities to succeed. Examined below, for each of the risks on a scale of 1-5, the probability of occurrence (5 is most likely), as well as its consistency (5 offers the greatest consequences) of one or more of InnoTels business models. The below analysis also examines how InnoTel tackle risks.

1 **5**
Technical risks: TMS technology does not measure up.
→ **The basic technology of TMS works:** Innotel´s Smart Caller telephony service utilizes the same principle of setup of non data callback call.

2 **4**
Carriers are trying to stop TMS:Calls are made in TMS switch´s virtual landline numbers. It would be technically possible to block these numbers
→ **Difficult to prevent TMS:** Mobile carriers initially attempted to stop mobile VoIP services such as Skype/Viber and the EU Court threatened with heavy fines. Innotel also comes with its own SIM cards and is not dependent on anyone else's SIM card.

1 **5**
Fnding the appropriate hardware: Hard to find the appropriate hardware for Cargo Tracking (GPS / GPRS) and connected car (OBD2)
→ **Wide range of open source Hard Ware:** Innotel can also develop its own HW or using someone's open source-based

2 **5**
Business Risks: It is not likely that the establishment takes a long time. The TMS technique has already attracted interest from several customers who want sto test the technology
→ **The product and the idea behind the Innovation is ready for go-2-market:**
TMS technology fits perfectly into the Cargo Tracking services. Requires little integration with GPS hardware.
The business case is very solid, which caught the interest of high reputed companies such as Volvo Cars, AB Volvo, Scania and others.
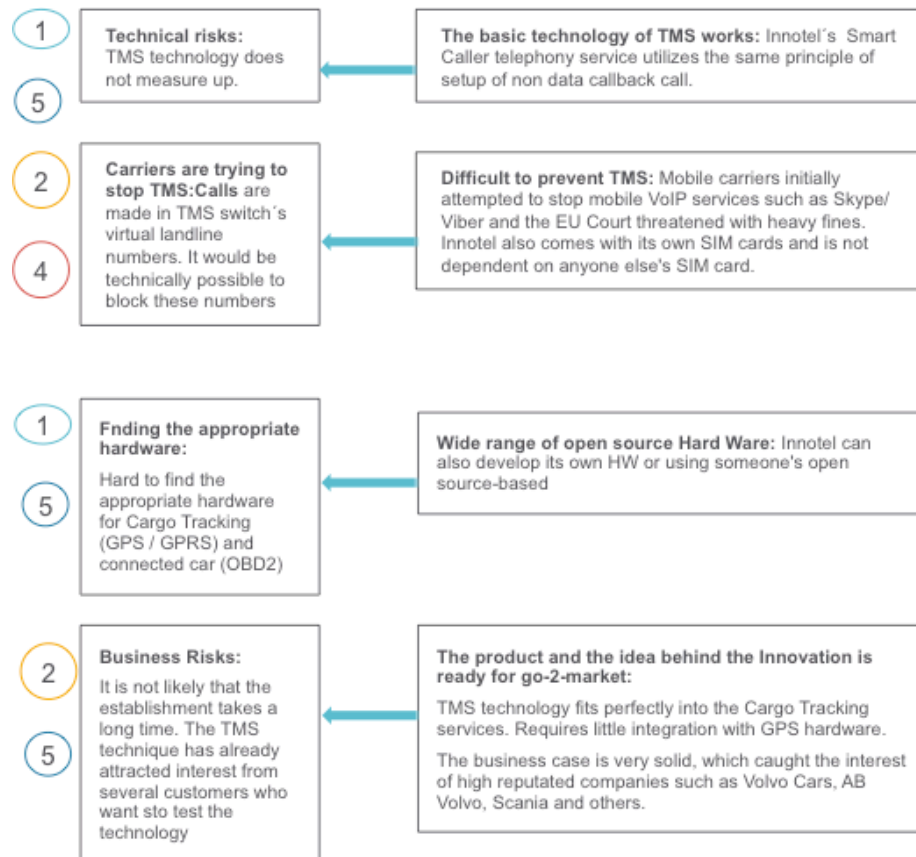
Figure 14: Examination of risks

4   Organization

Mattias Hansson (MSc & MBA), CEO and founder, Professional Profile: Entrepreneur, International Sales, Inventor & Finance. Started his career with Telia's venture capital company TBI, and thereafter over the last ten years, started up several companies that today are in the forefront in their domains:

- Innotel AB, an OTT provider with a unique business service Smart Caller for cheaper international mobile phone calls. InnoTel has won many awards (New Technology 33 list, the Red Herring Europe Top 100, STING Day Award).

- *OptiMobile AB* pioneer in mobile VoIP and winner of the Golden Mobile in 2006.

- *OptiCaller Software* develops software for mobile PBX with unique call optimization.

- *ICT Strategic Invest* is an investment company that started after a partial exit of OptiMobile. Mattias has competed in the Venture Cup at 7 times before and won the prize on three occasions (most recently in 2012 with AppBooster became 2a). Mattias was one of Veckans Affärer Super Talent in 2014 and has also been involved in the development of eight patents. Mattias Hansson has over the last 10 years has managed to bring in about 10 million SEK in soft financing
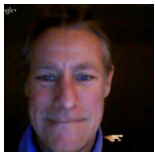
Peter Lindberg (BBA Gothenburg School of Economics & Henley Business School MBA Program) Professional Profile: Entrepreneur, Business Architect, International Digital Marketing, Sales & financing

Business developer within mobile service solutions in Cime Group, Consafe InfoTech, start-ups such as Scandinavian Wireless Intelligence (Wireless Travel Access), Reseguiden Interactive, and the OTT first mover collaboration service platform AveCom, with extensive expertise in digital business models, packaged digital solutions and concepts within telematics and cargo tracking in joint development projects together with: Telenor Innovation, Vodaphone, Tele1 Europe (TDC Song), Nokia, Ericsson, Motorola and Volvo Cars service "Volvo On Call" amongst others.

Nusret Haliti (MSc), Development, based in Macedonia Professional Profile: Entrepreneur, Project Management & Software Development

Runs the consulting firm Bridge Technologies, based in Macedonia. InnoTel has since 12 months outsourced all software development to Bridge Technologies, which contributes with a cost savings ratio of 5-6 vs. Swedish cost ratio. Possess extensive experience in high-end software projects within connected cars, i.e. development of a complete fleet management system in the US for real time monitoring of 100 garbage trucks.

Jörgen Steijer (BSC), Product Manager and co-founder, Professional Profile: Entrepreneur & Development. Has for the past 18 years been working in the TELCO industry. Jörgen worked for Ericsson during 6 years with mobile phone systems, prior to the start- up of OptiCall 2004 and OptiCaller Software 2010. Jorgen has 7st patents.

Eric Lagier (BBA/MBA), Executive Board Member
Professional Profile: Entrepreneur, Advisor, Angel Investor, International Online Sales
Previously Head of Mobile, Skype, Head of Wireless Business in EMEA for Oracle and Head of TDC DK - Mobil Internet division. Erik is based in SF Silicon Valley.

5 Implementation plan

The below road map table shows an overview of the most important activities during 2018.
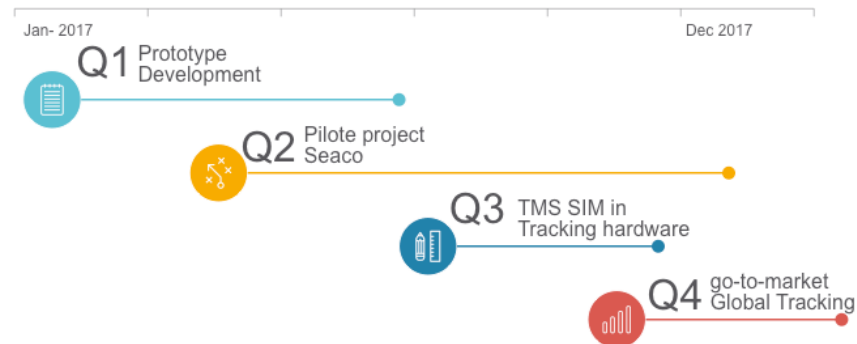

Figure 15: important activities during 2018

> Funding is currently highly prioritized. The management has extensive experience in fundraising together with individual business angels, VC´s and national government backed financing institutions such as Vinnova, Almi, VGR and EU´s EuroStar Funds. InnoTel is today involved in getting funding granted together with the outsourcing partner Bridge Technology in Macedonia/Albania and Swedfund with 1,8 million SEK.

> To offer integrated cloud service toward the Cargo Tracking segment with our own SIM card, and taking the advantages of our own complete solution that drastically decrease the costs, reliability and quality. This requires enhanced development to achieve a commercial go-to-market product / service.

> To license the technology, by targeting OEMs, car manufacturers, fleet management platforms, mobile carriers and OBD2 hardware suppliers, and also to provide APIs that easily can be integrated with various SaaS and various hardware.

This could be productized and entails the following:

> Adapted web service integrated with i.e. Google Maps for global tracking (demo version available already today)
> TMS Switch with 10 000 local numbers to be used for messaging
> TMS adapted OBD2 and GPS/3G hardware that can communicate with TMS Switch by using local numbers in calling mode.

In order to accomplish the above, we estimate that there is a calculated investment of approximately 5 million SEK, with 9-12 months lead time to develop a commercial product / service together with the pilot customers.

6 Profitability and funding

Revenue and cost analysis scenario	Y 2018	Y 2019	Y 2020	Y 2021
Cargo Tracking	100	800	3 000	8 000
Connected Car	0	1 200	4 800	12 000
M2M/IoT	0	1 200	2 400	4 800
Total Revenue (tSEK)	100	4 800	16 200	40 800
Wage cost Management	500	1 188	1 782	2 672
Wage cost sales & marketing	500	2 614	3 920	5 881
Wage cost developers (Macadonia)	634	950	1 426	2 138
Wage cost support (Macedonia)	158	317	356	535
Other expenses (Marketing, travel, IT, operations)	326	402	510	667
Cost MVNO SIM	54	648	1980	4 680
Total Expense (tSEK)	2 172	6 119	10 094	16 752
Operating Results (tSEK)	-2 072	-1 319	6 106	24 048

Revenues are divided into three different product categories areas:

1) Cargo tracking pricing is enhanced because the customer benefits of TMS and free roaming clearly outperforms today's operator services affected by high global data roaming charges.
2) Connected Cars, with a great opportunity to achieve cooperation with VCC, Volvo AB, Scania, CEVT and Nevs. If we manage to roll out TMS with the entire VCC, the above forecast is too defensive when VCC potentially have + 300 000 connected cars.
3) The M2M and the IoT market segments are the last to be processed. We will use our close relationship with the Swiss supplier u-blox, who supplies a wide range of hardware products within M2M that are used to handle cargo tracking and read electricity meters etc etc.

Costs can be kept down when half of all staff are employed in Macedonia. We have a very positive experience of this today by allocating resources in software development, technical support.

6.1 Growth targets, sales assumptions

	Y 2018	Y 2019	Y 2020	Y 2021
Number of Cargo Tracking TMS SIM	100	800	3 000	8 000
Number of Connected Cars TMS SIM	0	5 000	20 000	50 000
Number of M2M/IoT TMS SIM	0	5 000	10 000	20 000

Tracking of containers transported globally is a very interesting target group for the TMS service, with very high profit margins. The strategic volume targeting connected vehicles is possible to gain via in-steps pilot project in close cooperation with Volvo Cars, Volvo AB and Scania.

6.2 Future capital needs

It is the board's assessment that InnoTel´s working capital is not sufficient in order to secure the development and launch of the TMS technology within at least twelve months time, counting from the dating of this business plan.

Capitalization is considered to be expansive as it aims to establish and position Innotel as one of the leading players in the OTT based messaging services for Cargo Container Tracking and connected vehicles in the market. To take this position, additional financial resources are required in order to develop and package the TMS technology and increase market awareness aligned with InnoTel´s strategy. The funds shall be is earmarked for the TMS development, where the breakeven for the business area TMS is expected to be reached in Q1 2019.

Funding of the TMS innovation has so far been secured by:

1) Soft funding: *InnoTels CEO Mattias Hansson has since the past 10 years brought in + 10 million SEK from EU, Vinnova, VGR, Almi and other government backed institutions. Innotel has also on a regular basis applied via Eurostar EU's funds in order to grant funding.*
2) Angels: InnoTel´s management has broad experience in generating capital from business angels. A number of private equity individuals have already expressed interest to invest in the TMS venture.
3) Customer financing: is always the best financing.

6.3 Summary – How we do it

Patent Protected Technology
Swedish, EU and US patent applications

Strong Technology & Business Value
Unique OTT interruptive OTT service, replaces mobile data

Strong Team
Global Telco entrepreneur team with optimized competence profiles

Huge Market
Actionable insights to develop one's career

Well Bundled

Highly Innovative

Highly Skilled

Go-2-Market Ready

Figure 16: Summary of opportunities