**Business Plan**

**Key words:**

SaaS, Cloud, Container, Google, Transportation Model

**Mission:**

Software as A Service (SaaS) company to provide transportation modeling software for governments, consultants, and academic users.

**Advantages:**

Cloud computing is experiencing a major breakthrough with the recently public available container services, such as Google Container Engine (GCE). However, transportation modeling software industry has not seen the adoption of the new technology.

Transportation modeling is highly computational intensive and very complex to build and use. Many models require high-end server machines to execute in order to save model run time. Excessive run time becomes a major bottleneck to build more advanced models. The cost to purchase servers, install software, maintain IT infrastructure, and backup the large files is very expensive. The nature of the workload is very volatile, which results in idling computing resources when workload is light and short of computers when the workload is heavy.

The SaaS service can greatly reduce the cost by eliminating all hardware needs and provide unlimited computing resource and secure storage spaces. The service is only charged when the model is actually running and users could concentrate on model design instead of the IT issues. It also has all the benefits of cloud services, such as access anywhere and easy sharing and collaberating.

GCE has been successfully used by large companies, such as Google itself. SaaS companies are gaining market share quickly, such as Dropbox and Slack. It is considered another wave of IT innovation to build SaaS on container cloud services.

**Competitors:**

Several desktop software companies dominant the current US market. For travel demand modeling, Caliper’s TransCAD and Citilab’s Cube are the widely used desktop software. Citilab has been promoting cloud virtual machine for a few years. However, the effort is not very successful due to the high cost of the technology and the closeness of the software environment. There are really no SaaS competitors in the market right now.

**Market:**

Caliper and Citilabs have about one hundred employees each. They both sell software around the world. They also provide consulting services to users. There are also other software companies in the US market, such as PTV and INRO. The overall market for transportation modeling software could be 10 to 20 million dollars each year in US. World wide market could be 100 to 200 million dollars annually.

**Risk:**

Although both GCE and SaaS have been proven successful, implementing the technologies in modeling is lack of real world examples. The GCE is quickly evolving with more advanced tools. Technical difficulties should not be the killing factor in this case.

Modeling community could be slow in accepting new technologies. However, the SaaS will bring enormous cost and time savings.

Desktop software companies can follow up. The market is relatively small and lack of new competitors, which is the reason the current players are slow in technology innovations. The software needs both experties in transportation modeling and software engineering, thus is really short in innovative and experienced developers.

**Current team:**

Myself. I have a master degree in urban planning and has been working on transportation modeling for over fourteen years. I’ve worked for governments, consulting firms, and private investing companies. I am highly skilled in programming and modeling. I clearly understand the needs of the modeling software users and the key issues to improve the productivity in the day-to-day work.

I am passionate in learning new computing technologies and using them to solve problems in the work.

**Milestones:**

Current status:

Built a prototype assignment model on local machine. Working on deployment to GCE service.

In six months

Build a working model using GCE services. The model is an assignment model, which is the most time consuming step in the modeling stream.

The software could be attached seamlessly to the existing models as a replacement to the assignment step. We can start to sale the models as a consulting service to clients.

In twelve to eighteen month

Build SaaS service website for the travel demand modeling.

In five years

Develop SaaS software package for various transportation models.

**Financial needs:**

In six months - $150,000

Find a partner who is an expert in GCE and SaaS software development.

In twelve to eighteen months - $500,000

Build a 3-4 people team to write the software.

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