

2012

PROJECT CHARTER: UPGRADE GRT'S PUBLIC MOBILE WEB TECHNOLOGIES FOR LRT DEPLOYMENT



Figure 1 - (Grand River Transit, 2012)

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SEP*725

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1 Project Identification

Project Name Upgrade GRT's Public Mobile Web Technologies for LRT Deployment

Document ID	LRT_inet_01
Creation Date	01 FEB 2012
Client:	Region of Waterloo - Grand River Transit
Project Sponsor	Tesla Brown – CTO of InnoMotion Consulting Ltd.
Date Submitted	01 FEB 2012

2 Summary of Business Case

Case Type: Customer Request

In order to keep their customer current on the latest transit information, Regional of Waterloo's Grand River Transit (GRT) has requested an upgrade of their mobile web technologies to reflect their new light rail transit (LRT) information. This compliments GRT's 2012 business plan and technology strategies to attract greater ridership to public transit. (Appendix 1 & 2)

GRT have selected our consulting firm because they believed, and we agreed, that we can provide the necessary technical resources and solution in a timely manner. (Appendix 1)

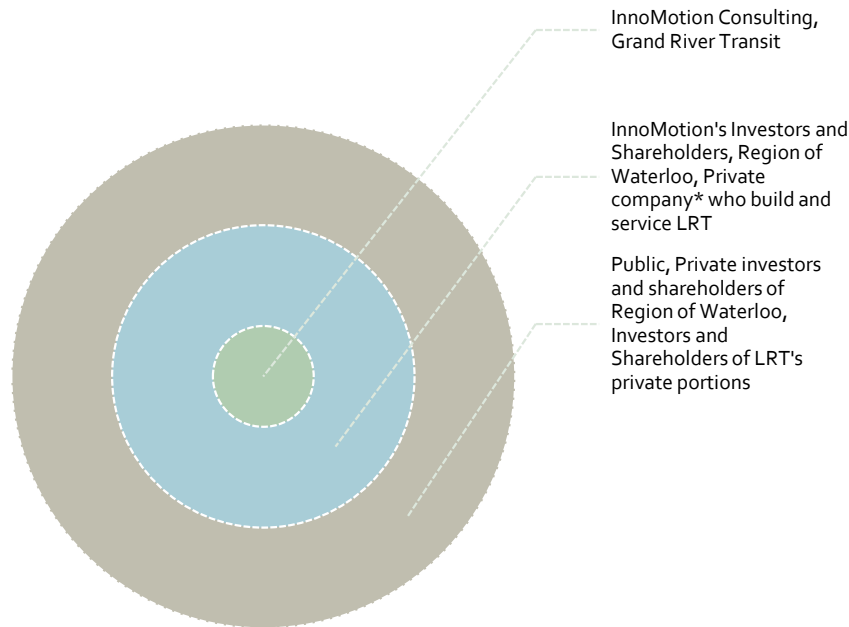
3 Project Goal

To integrate GRT's up-to-date LRT information to a mobile application that is accessible by the public, maintainable by GRT's IT resources, and deployable to GRT's mobile technologies by the end of year 2017.

4 Project Objectives

- Develop and Integrate LRT information seamlessly to mobile application that includes other current GRT information
- Mobile solution must be accessible to the public via defined mobile OS platforms
- The solution must be transitioned to GRT's IT department for management after completion of development
- Solution, not including InnoMotion maintenance support, must be completed in 6 months and prior to end of 2017
- Quality control of solution must be conducted and must be accepted by GRT
- Project must be profitable for InnoMotion and within GRT stated budget of \$500 000 CAD

5 Stakeholders



*Has not been established

6 Identified Potential Benefits

6.1 To the Client, Grand River Transit

- Increase ridership
- Increase revenue, may shorten time for return of investment
- Increase support of the public to GRT's business plans
- Awareness and addition avenue of promotion of new transit program

6.2 To Other Stakeholders

To the public and consumers: Ability to retrieve up-to-date LRT info on mobile devices

To Region of Waterloo:

- part of success recognition for LRT implementation
- instill confidence of local residents to municipal government and spending strategy

6.3 To InnoMotion

- Align project to strategic plan
 - Create positive relationship with GRT and Regional of Waterloo through positive execution of project

- Add diversity of collaborating with government organizations. These organizations are very stable and are potential long-term partners
 - Additional experience to our product portfolio
- On trend with providing services in a very lucrative industry – software mobile application

7 Project Boundaries at a Glance

7.1 General Requirements

Requirements are based on GRT's statement of work (Appendix 1) and InnoMotion's company policies.

7.1.1 GRT Client-based

- LRT portion of the mobile application must be easily maintainable by up to TWO professional IT personnel
- Mobile solution must be in accordance with GRT's internet accessibility policies
- Schedules, Route Map, and defined valuable LRT information should be incorporated into a mobile application
- The LRT content must be seamlessly integrated into current GRT mobile web solution,
- The public must be able to access content by smartphones only
- The LRT content must be maintainable by no more than two GRT IT staff to keep up-to-date
- Objectives must be met within given funding
- LRT content must be in accordance with GRT web accessibility policies

7.1.2 Internal Project-based

- Project must be completed within 20% range of the target budget
- Scope must be defined and agreed upon by both internal project team and client
- All activities and tasks associated with the project should be aligned with, and be supported by, the project goal

7.2 Summary of Scope

7.2.1 In Scope

Popular mobile OS solutions should be considered for deployment – iOS, Android, Blackberry.

LRT related information should be used to define what is valuable for mobile solution

Current server web technologies as well as GRT's current web technology strategies should be used to decide approaches to ease integration. Real-time web technologies should also be considered for implementation as much as possible to increase ease of future maintainability.

Implementation and initial upgrade is the responsibility of InnoMotion. Deployment should be collaborated with GRT IT department.

7.2.2 Out of Scope

- Other mobile solutions such as tablets.
- Handling GRT information and content not associated with LRT
- Desktop internet solutions
- Outdated web and mobile technologies. All technologies should be within the most recent 3 versions of release.
- Work outside of contractual agreement

7.2.3 Detailed Scope documentation

The complete scope documentation will be published internally along side of the Project Management Plan at a future date.

7.3 Acceptance Criteria

1. All objectives are met to GRT expectations
2. Verification and quality control of objectives are conducted and approved by both external contractor and GRT representative
3. The expectations of the project goal are met and agreed by both parties

8 Deliverables

- 1) Physical product - Gold build of app via CD
- 2) Integration to GRT IT system
 - a) Server portion of software
 - b) Working apps published in app stores
- 3) Administration Guide
- 4) Transition plan
- 5) 360 man hours of InnoMotion tech support usable for up to 2 years or until upgrades that affect the LRT's mobile web contents and technologies.
- 6) Project Schedule and milestone reports
- 7) Collaboration/feedback session per milestone report

9 Schedule of Milestones

Milestones are listed in chronological order. It should be noted that some milestones can be completed concurrently and by various resources.

Milestone	Justification or Match to Objectives and/or Requirements	Scheduled Amount of Time to Accomplish Objectives	Expected Completion Date
Project Start	Meets the object of the Project being started more than 6 months before LRT launch deadline	0	01 April 2017

Publish Internally the Project Management Plan	Part of documentation deliverable. It is a preparation and reference of reports for client.	2 Months	01 June 2017
Build Proof of Concept	Identify feasibility of project	2 weeks	31 April 2017
Build Server-side API	This is a physical part of the mobile solution. It is a large portion of seamless integration of web technologies.	3 Months	17 June 2012
Build and Functional Test Android Application	It is executed to meet the objective of accessibility to the public and persons of disabilities via a mobile platform.	3 Months	August 17 2017
Build and Functional Test iOS Application	It is executed to meet the objective of accessibility to the public and persons of disabilities via a mobile platform.	3 Months	August 24 2017
Build and Functional Test Blackberry Application	It is executed to meet the objective of accessibility to the public and persons of disabilities via a mobile platform.	1 Month	August 24 2017
Regression Test	To meet the objective of quality control	3 weeks	15 Sept 2017
Deploy into Beta Test program	To meet the objective of quality control	2 Months	15 Sept 2017
Deploy to GRT Production	To meet the requirements of public mobile integration and the majority of the project goal. It is also a defined deliverable	2 weeks	15 Sept 2017
Successful GRT IT Transition	To fulfill client's requirement of ownership and maintenance.	2 weeks	31 Sept 2017
Final Presentation of Results and Give Deliverables	Identify a clear indication of product delivery and approval	1 weeks	31 Sept 2017

	by clients.		
InnoMotion Product Maintenance mode	To fulfill continual maintenance of the contract and positive relationship with the client	12 months or less	31 Sept 2018
Close out project and contract	Identify a clear indicator of contract completion	2 weeks	31 Sept 2018

10 Overall Funding and Target Budget

From GRT's statement of work, the total amount of funding allowed by external resource is **\$500 000**.

Our **target budget is less than \$270 000**, approximate to the total expected expenditure calculated from the "Brief Summary of Project Budget".

Our expect profit is approximately **\$230 000**.

Refer to "Brief Summary of Project Budget" in Appendix 3 for more detailed breakdown.

11 Summary of Expected Resources

11.1 Roles and Responsibilities

Resource Role Name	Description and Responsibilities
Crowd-sourced Expert Test Sources	We are outsourcing testing to an external quality assurance company in order to maximize amount of resources used for tests. Their responsibilities are to plan a test strategy, execute the strategy, functional testing, regression testing, and simulate beta testing.
Developer	These personnel research and develop the software deliverable.
Internet Data Service	This is a service. This tool will be used throughout all phases of the project.
IT Administrator	This person implements and deploys the deliverable according to hardware and software specifications.
Miscellaneous Internal Resource	This is an addition help personnel for general administration as well as accounting for executive authorization resource.
Mobile Test Devices	These are tools used to simulate testing on real devices to confirm proof of concept and to use for internal quality control.
Project Manager	This person plan and orchestrate the project from start to finish.

	He/She ensures expectations are managed and accept criteria are met.
Router Switch	This tool connects internal computer devices to the internet.
Project Sponsor	An InnoMotion executive that champions the project and has ultimate authority for the vendor (InnoMotive) party in this particular project
Technical Lead	This person is a technical guide to the product deliverable. He/She leads and delegates technical tasks to developers.
Web Server	Stores and execute the software product deliverable.

12 Communications

12.1 Formal Documentation

All information related to project should be documented and records should be placed in a registry. Changes to scope, contract or project plan must be stated in formal written documentation such as a form, contract, and/or amendments to current documents. All formal documents that are published to both parties must be signed by both parties to confirm agreement.

12.2 Other Channels of Communication

Informal communication such as verbal interactions, phone calls, emails, memorandum, etc. may be used to establish, clarify and maintain relationship with client.

13 Risk, Assumptions, and Caveats

13.1 Table of High-Level Variables

Name	Description	Variable Type (Risk/ Assumption/ Caveat)	Probability (Inevitable/ Likely/ Not Likely/ Blue Moon/ Unpredictable)	Impact (High/ Medium/ Low)	Solution (Prevent, Accept, Mitigate)
Enterprise Environmental Factors					
Emerging Technologies	IT usually do frequent and scheduled updates to the necessary technologies to keep validity of contract with vendors and	Caveat	Inevitable	Medium-Low	Accept: Usually these are non-impacting software updates. Mitigate: When it impacts the

	improve performance of the system				project. Testing should also be informed in order for proper quality assurance.
Sub-contract Test Process	InnoMotion has decided to contract out testing to take advantage of the current trend of crowd-sourcing and an inexpensive way to increase substantial amount of human resource	Caveat	Inevitable	High	Mitigate: Must be diligent in communications and understand of work contract
Sick/ Out of office Employees	Human have a tendency to get sick or need personal leave	Risk	Likely	Medium-High	Accept: Additional resource has been assign to mitigate transition. If a main internal resource is absent for long period of time. Replacement should be found depending on InnoMotion overall priorities
Funding	As a small company, funds may fluctuate with greater impact to company resources and assets.	Risk	Not likely	High	Prevent: This project has been calculated to be funded by GRT
Insurance	InnoMotion should have issuance for natural disaster coverage as well as litigation funds.	Assumption	Not likely	High	Prevent litigation through clear communication with client and understanding of current business laws. Accept natural disaster or epidemics and verified these are covered in the current insurance policies
Organization Process Assets					
R&D Process	Current R&D process is Agile which is	Caveat	Inevitable	Low	If client would like another process, it

	advantageous for rapid development and transparency for client into project				must go under change management to amend requirements.
Documentation	There should be a knowledge management process	Assumption	Inevitable	Medium	Accept: InnoMotion's knowledge management policies should be followed as well as any extra documents requirement by work contracts to avoid litigation.
Quality Control	Quality should conform to the expectations of the client.	Assumption	Inevitable	High	Success of the project depends on quality expectations of the client. There should be a formal agreement between both parties on the verification and quality control process.
Project- Specific Factors					
IT system downtime for upgrades	IT upgrades usually have impact on hardware and web service resources	Risk	Likely	High	Transition and implementation plans should be created and tested before deployment into production.
Lack of Available Information	There are times when documentation or proprietary information needed and not provided timely	Risk	Likely	Medium	Mitigate: This may change the commitment agreement. If information is completely not obtainable. Change management should occur.
Disagreement on Commitment	There may be difference in expectation of work	Risk	Likely	Medium	Prevent: Both parties should formally agree on a contract of work before development begins
Change	Any changes in the	Assumption	Likely	Depends	Mitigate:

Management	project should be requested and evaluated by change management			on change	If changes are needed, both parties must have formal indication of agreement to the changes
Registry of Risk	Records should be created for knowledge management and mitigation of risks	Assumption	Inevitable	Medium	There will be a registry of risks
Delays	Timeline Changes	Risk	Not likely	High	Mitigate with change management requests

14 More Information

14.1 Appendices

1. [GRT Statement of Work](#)
2. [InnoMotion Strategic Plan](#)
3. [Brief Summary of Project Budget](#)
4. GRT References
 - 4.1. GRT Business Plan 2012 (Region of Waterloo, 2012)
Region of Waterloo. (2012). *GRT Business Plan will be recommended to Regional Planning & Works on January 31*. Retrieved February 1, 2012, from Grand River Transit: <http://www.grt.ca/en/doingBusiness/grtbusinessplan.asp>
 - 4.2. About Region of Waterloo Transit Project (Grand River Transit, 2012)
Grand River Transit. (2012). *About the Project*. Retrieved February 1, 2012, from Grand River Transit: <http://rapidtransit.region.waterloo.on.ca/about-the-project.html>
 - 4.3. Title Page Visual
Grand River Transit. (2012). *Videos & Visuals*. Retrieved February 1, 2012, from Grand River Transit: <http://rapidtransit.region.waterloo.on.ca/videos-visuals.html#photos>

15 Document Revisions and Approvals

Version	Date	Revised by	Description	Approved by	Approver's Title and Contact Information
1	01 Feb 2012	Janette Yuen	Creation of Project Charter		