

The Great Mind Challenge – Transportation Portal

1.	Name of the Project	Transportation Portal
2.	Objective/ Vision	<p>Provide an application which allows residents and visitors of a city to find out more about transportation-related aspects about the city. Aspects include information about public transportation options, schedules, fares, money-handling policies, and so forth (education). The site might also provide real-time information about bus and other public transportation current locations.</p> <p>The application could also provide information about traffic-related studies and/or projects that the city is working on. Anything from new traffic lights to new road improvement projects, to traffic analysis and analytics about traffic flow. The site could also recommend best means of transportation from point A to point B, given the time of day that the traveler is expecting to travel.</p> <p>Support resident and visitor feedback for a variety of items: current traffic conditions, report unusual congestion, report a road safety issue (pothole, obstruction, etc.), submit a suggestion for improvement.</p>
3.	Users of the System	<p>A. city residents B. visitors C. city employees D.</p>
4.	Functional Requirements (Atleast Eight)	<ul style="list-style-type: none"> • Web accessible information base • Provide templates for information entry – e.g. education, travel directions, public transportation feedback, etc. • Allow for easy update of information by city employees • Allow for easy retrieval of feedback collected to facilitate acting on feedback received • Extensible to allow each city to update with their own specific information • Allow report of transportation-related issue (pothole, congestion, etc.) • Allow submission of suggestions for improvement • Enable a map view of the city which shows real-time information about traffic congestion, public transportation bus and train locations, and so on.
5.	Non-functional requirements (Atleast Four)	<ul style="list-style-type: none"> • Support at least 200 concurrently connected users • Robust database design to handle expected users of up to 1,000,000 residents • Response time for website should be sub-second • Easy backup and recovery of user supplied information

6.	Optional features	<ul style="list-style-type: none"> a. b. c.
7.	User interface priorities	<ul style="list-style-type: none"> A. Professional look and feel B. Browser testing and support for IE, Safari, Chrome, and Firefox. C. Reports exportable in .XLS, .PDF or any other desirable format D. Allow input of national language characters (e.g. Vietnamese, Chinese, Spanish, etc.)
8.	Reports	<ul style="list-style-type: none"> A. Report of traffic levels at selected intersections B. Report of bus and train arrival times vs. scheduled times C. Usage report of website (hit rates, popular pages) D. Report of user suggestions
9.	Other important issues	<ul style="list-style-type: none"> A. B.
10.	Team Size	2 – 4 students
11.	Technologies to be used	UML, J2EE, XML, e-Forms, AJAX, Web 2.0, Web-services, SOA
12.	Tools to be Used	<ul style="list-style-type: none"> • Rational Team Concert, Requirements Composer, Design Manager • Eclipse / RAD • WebSphere Portal/ WAS/ WAS CE / WPS • DB2 Express – ‘C’ or DB2 UDB • Linux will be the preferred OS.
13.	Final Deliverable must include	<ul style="list-style-type: none"> A. Online or offline help to above said users, Application deployment executive and developer B. Instructions on what and how to update the web application data (static pages) with city-specific information. C. Application archive (.war/ear) with source code D. Database backup and DDL Script E. Complete Source code