Assessment Brief – GLOBAL CHALLENGE PROJECT

Assessment type	Written assignment – group The project submission should comprise a main report of maximum 5000 words, together with an Executive Summary of maximum 750 words, accompanied by Appendices, which should be used for supporting documents related to 4(a) to (i) above. The maximum length of the report plus Appendices is 30 pages.
Due date	12 January 2023 at 12 noon.
Submission point	Blackboard
Submission format	.pdf file
Weighting	75% of overall mark, moderated by reflective log and peer group assessment
Task objectives	• Comprehensive utilisation of strategic business management, engineering design, emerging technologies and risk management to deliver a practically feasible project outcome of a significant academic and industrial value. • Critical investigation of engineering with management issues through detailed analysis and in-depth assessment of business, design, sustainability, regulatory compliance, emerging technology, risk and uncertainty, using methods and tools as appropriate. • Utilising diverse background knowledge within an interdisciplinary team to methodically investigate, identify, assess and strategize a solution for a multifaceted project. • Communicate project decisions and outcomes to stakeholders exploring ethical dilemmas and professional responsibilities of engineers.
Task Requirements	In response to the climate emergency and inspired by an article published by McKinsey on the future of urban mobility[1], the City Council of Urbanville[2] is considering what action it should take to support a transition to low-carbon transportation in its city region. It has commissioned a report from the University of Bristol to advise on the engineering and management issues associated with such a transition, and in particular to make recommendations for a 'flagship project' for the Council to support. Your task is to produce this report, which should contain the following information: (1) The global city you have chosen to represent Urbanville. This should be a city from a developing country as defined according to the International Monetary Fund's World Economic Outlook Database, October 2018[3]. (2) A brief summary of the present transportation arrangements for commuting in Urbanville.

[1] McKinsey, Urban Mobility at a Tipping Point, 2015, https://www.mckinsey.com/business-functions/sustainability/our-insights/urban-mobility-at-a-tipping-point

[2] We use the term Urbanville as a placeholder here. Each group should choose a city to focus on.

[3] https://en.wikipedia.org/wiki/Developing_country provides a useful summary.

	(3) An assessment of the potential for different strategies and technologies to decarbonise transportation in Urbanville in the future, with the risks associated with each, and an assessment of the directions in which research and development may be needed before adoption is possible. (4) Development of a project proposal* for a product, service or infrastructure system to support future transportation in Urbanville, with the following details: a. An explanation of the technical and commercial reasons why the flagship project proposal has been chosen, and how it fits with an overall decarbonisation strategy. b. The requirements for the proposal, expressed in the form of a requirements specification. c. A PESTLE and stakeholder analysis for the City Council d. Identification of the key strategic challenges for the City Council raised from the proposed product, service or infrastructure system solution e. A one-page business model, constructed using the Business Model Canvas, to support the proposal. f. An initial suggestion for a system architecture to deliver the proposal. g. A high-level description of the design process(es) needed to deliver the system elements. h. The proposal's life cycle, and an indication of how an environmental impact assessment would be carried out for the proposal. i. Identification, quantification and prioritisation of risks associated with the technical, business and project management aspects. j. Description of routes for the mitigation of project risk. * Examples of proposals include provision of a new tramline, an electric car or bicycle rental scheme, a lift-sharing system, bicycle tracks and infrastructure, a demand-responsive transportation system as a service and so on.
Marking criteria	Assessment of the project will be made by evaluating the following aspects of the group report • Background research on technologies and application context • Development of the argument in the report, including grasp of issues and ability to display critical analysis • Quality and completeness of the presented proposal • Use of tools, methods and other course material, including comprehension of the material and ability to synthesize and employ methods in a suitable way • Evidence of broader reading of relevant material • Organisation and presentation of the report, including the report structure, clarity of writing and support for the arguments. Note that information available in the public domain is to be used and interpreted critically, with due regard for credibility of sources. Due regard should also be given to the needs of the client in report writing and

	recommendations. Marks may be deducted for poor report presentation, including poor referencing of information sources.

Assessment Brief – GLOBAL CHALLENGE PROJECT

Assessment type	Written assignment – individual
Due date	12 January 2023 at 12 noon
Submission point	Blackboard
Submission format	Pdf file
Weighting	Contributes to moderation of assessment of project.
Task objective	To encourage individual reflection on the learning in the Teaching Block 1 units, and to allow critical evaluation of student contributions to the Global Challenge Project team effort.
Task Requirements	Each student should submit a *structured reflective log* of maximum 750 words giving details of his or her particular contributions to the project, reflecting on the way the team has organised itself to approach the project, and on the value and ease of use of the tools and methods applied by the student in his/her work.
Marking criteria	The assessment of the structured reflective log will be used, together with individual student performance at viva and group peer assessment returns, to allow individual student grades for the Global Challenge Project to be varied from the grades allocated to the project reports. Assessors will be looking for: • Evidence of a satisfactory contribution of the individual student to the overall group achievement. • Reflection by the student on the learning experience of undertaking the project. • Critical evaluation of the taught material in the context of the Global Challenge Project execution.

Assessment Brief – GLOBAL CHALLENGE PROJECT

Assessment type	Viva voce examination - group
Due date	16 January 2023
Submission point	None
Submission format	N/A
Weighting	25% of overall mark
Task objective	This brief applies to the group viva voce examination that will take place after submission of group report and reflective logs for the Global Challenge Project, and will have the objective of exploring the submitting group's understanding of the project.
Task Requirements	Each group should prepare and deliver a short (15 minute maximum) presentation of their work, after which members of the group will be questioned on their understanding of the presented work.
Marking criteria	Assessors will be looking for: • Succinct and clear presentation of the key points of the reported work. • Evidence of contribution to the work by different members of the group. • Ability to explain key concepts from the work, especially any points that may not be clearly explained in the report.