

Innovation created by the Marco Polo Programme

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Introduction

This assignment will briefly consider the general objectives of the Marco Polo project. Which was specifically designed to create definite actions in five areas of transportation: Modal Shift Action, Motorways of the Sea Actions, Catalyst Actions, Traffic Avoidance Actions, and Common Learning Action. It will therefore evaluate the value that the programme has added to the freight transportation network around Europe, and why it was created originally. It will demonstrate that the innovation thinking in the operations process in the transportation industry has achieved a more productive and profitable, sustainable outcome.

The Marco Programme

The total cost of the Marco programme between 2003 and 2013 was €552 million, this budget was split into two stages, the Marco Polo programme 1 and 2, receiving €102 million, and €450 million respectively (European Commission, 2014) (Committee 2007 Functioning of the EEA Agreement, 2008).

The Marco Polo 1 programmes have been managed by DG Energy and Transport of the European commission. On the 1st of March 2008, the Marco Polo 2 went through some transformations; the DG Energy and Transport Committee of the European Commission, transferred its management responsibilities to the Executive Agency for Competitiveness and Innovation (EACI).

The Marco Polo programme is a European project, which aims to employ the European infrastructure to its maximum capacity, in order “to shift freight from the road to sea, rail and inland waterways”, with the objective of reducing CO2 emissions to meet the European environmental targets in line with current legislation and the Kyoto Protocol (Commission, Energy, Climate change, Environment, 2019). It also had the aim of reducing road traffic congestions and noise pollution (European Executive Agency for Competitiveness and Innovation, 2009).

The Marco Polo project allows an integration system between the three main transportation ways: road, rail and sea; in doing so, it has increased the flow of goods. This is because it helps the members of the European Union trade their goods, on an international scale, with more flexibility, thereby, creating an integrated market. Integrated markets are common in manufacture, where assembly lines have different products in the supply chain manufactured in different areas of Europe, which are then transported to a single area for assembly (Comission's, 2014).

The Marco Polo programme also created a new education platform for logistics professionals who had to move out of their freight movement 'comfort zone'. The programme educated them on how to innovate and utilise the already existing resources, like the so-called 'motorways of the seas', and take full advantage of the European waterways such as the Atlantic, Mediterranean and the Baltic Seas and in by doing so creating a sustainable and green logistic alternative.

One of the advantages that Marco Polo brought is the incentive for governments to create new projects; the Portuguese Government used grant funding from the Marco Polo programme to begin the construction of a railway line. Although the construction was fully grant funded by the European Union Commission, which took away the debate over who would pay for the project, there were still objections from external stakeholders such as landowners, businesses and residents who were in the path of the proposed route.

Between 2003, and 2009, 125 projects, which involved more than 500 companies, received funding from the Marco Polo programme. When Marco Polo 2 began, between 2007, and 2009, 70 projects were selected for grant funding.

Marco Polo 2's aims were to reduce the tonnage of freight, on the roads by 54 billion tonnes, per kilometre, per year, in doing so reducing environmental and social costs, as a result of freight transport, by €1.4 billion.

The general objective of the Marco Polo project was specifically designed to create definite actions in five areas of transportation: Modal Shift Action, Motorways of the Sea Actions, Catalyst Actions, Traffic Avoidance Actions, and Common Learning Action (Ex ante Evaluation Marco Polo II, 2007-2013).

Modal shift

Modal shift action is an action to transfer the amount of heavy freight transport, on the roads, to rail, sea and air; it is recognised that road freight cannot be eradicated in full, however, the aim is to reduce it to short distances; as a consequence, congestion and pollution will be reduced. If there is less congestion on the roads, road transportation times can be more predictable. Congestion in the UK, according to statistics from the TomTom Traffic Index, cost UK businesses, in the region of £915,000,000 a year in lost productivity (BV, 2017).

Congestion in the UK's top 25 towns and cities alone results in commercial vehicles spending approximately 129 hours per year in traffic. Across the UK, as a whole, lorry drivers spend more than 16 working days per year in congestion; this not only has an impact on a company's bottom line, as a driver is, in essence, being paid to sit in traffic, rather than drive. In addition, restrictions with tachograph driving hours can result in a one day becoming two, for example; this can impact on the driver's wellbeing (BV, 2017).

In the transport and logistics industries, speed is one of the most critical factors to ensure success, satisfy the customers', avoid delays in the supply chain, and complete the task within the allocated timeframe (Russell & Taylor, 2014).

From an operational and strategical point of view, Modal Shift action can improve logistics performance, by creating transport corridors that reduce costs, such as delays on the delivery, mitigating issues that can be caused by road accidents which creates a negative impact on supplying chain, predict accuracy, time in order to facilitate operations for load and offload process; Modal Shift action also makes the company more attractive to investors by reduce its CO2 emission footprint, and by creating a positive perspective towards environmental issues (Rushton & Croucher, 2017). Good analysis

The key guidelines of projects the and calculation

Modal Shift Actions:

- Aid to start-up services
- Robust, but not innovative: - just shift freight off road
- Subsidy of €2 per 500 tkm shifted (can be up to €3 per 500 tkm for some maritime or inland waterway projects - see question 5.h)
- at least 60 million tkm shifted on average per year (13 million tkm for IWW projects and 30 million tkm for single wagon load projects) Subsidy rate up to 35% of eligible costs
- Ancillary infrastructure costs eligible up to 20% of total eligible costs
- Subsidy up to maximum 36 months and minimum 24 months funding period
- No unacceptable distortions of competition
- Viable after subsidy ends Good source

(Yu, 2015) (Comission's, 2014)

Motorways of the Seas Actions (MoS)

The development of the 'motorways of the seas' (MOS) aims is to introduce new maritime-based logistics chains in Europe; this is one of many priorities of the Connecting Europe Facility (CEF). The aim is to promote a green, practical, efficient sea-based transport and release the over-stretched road network in Europe. The MoS is more efficient and is commercially more sustainable when it is integrated of inland waterways; the integration of the two systems gives transports providers a potential resource of maritime transport.

Three objectives of the motorway projects:

1. Freight flow absorptions on sea-base logistical routes.
2. Increasing cohesion.
3. Reducing road congestion though modal shift.

The Marco Polo 2 programme contributes towards the ambition of a European Maritime Transport Space to remove barriers and restrictions. The Core Network Corridors connect neighbouring countries with maritime freight transport infrastructure (Edwards, 2017)

Good point

EU Motorway of the sea



Inland waterways and ports

EU Member States



(European Commission, 2019)

The image above highlights the motorways of the sea and the inland waterways around Europe, which therefore can be said that there is a potential of further development of its usage, with the potential of creating a sustainable and environmentally friendly transport network in order to reduce costs that can be encountered in the road networks or in other methods of freight transportation.

Gulf stream

Motor Shift action built on the already existing MoS strategy by creating the Gulf Stream project as an alternative to European mainland road transportation (via Calais to the UK) by freighting traffic from the South of England to the North of Spain, South of England to the North of France, and the North of France to Southern Ireland, using in total 9 ports, 8 routes and 8 vessels, on freight only ships (Freightlink, 2019). These services offer an accompanied trailer vehicle or unaccompanied cargo service, as a roll-on roll-off service. The roll on roll off facility gives a competitive advantage to logistic providers when cargo is unaccompanied, as it reduces costs, contract prices can be reduced by lessening road driving time, t

Good point

reducing operation costs, such as fuel and wages, also mitigating the risk of traffic delays, whether this be due to congestion, accidents, road conditions or traffic diversions. Especially as heavy freight cannot utilise the road network on France at weekend, the service utilises this 'slack' time, to be at sea; arriving in the UK on a Sunday when there are no driving restrictions in place, conversely, the service leaves the UK on a Sunday to allow drivers to arrive on a Monday in Europe. Users of these routes can gain competitive advantage by using this 'door to port service (Union, 2010)'. Good analysis

Catalyst actions

As already mentioned above, the Marco Polo programme is concerned with the limitations and barriers that are presented to freight transport, which are caused by issues presented in the Europe transport network infrastructure. The Catalyst Actions project has funding available for innovation; the subsidiary will cover up to 20% of the infrastructure project cost. The project must involve a minimum of two-member states of the European Union and run for a minimum period of 3 to 5 years. Between 2007, and 2009, the Catalyst Actions awarded grants to 70 projects, which account for 10% of the total grant of the Marco Polo project in 2009 (Commission, Marco Polo II Programme - Frequently Asked Questions (FAQ), 2013).

The ItaloExpress projects is one of the many successful projects which have contributed to and improved the logistics service between member states. Before the service was improved, the European commission evaluated that the railway services had massive problems between Northern Germany to North Italy; problems such as punctuality, reliability and flexibility (Conference, 2008). Good point

The project received funding from the Marco Polo project of €3,500,000 between January 2005, and December 2008. The project created a partnership between logistic provider in different countries in order to improve the transportation network; the aim was to move freight more efficiently. These partnerships were: TX Logistik AG, Bad Honnef (Germany), Trenitalia S.P.A (Italy) and DHL Express (Sweden). The development of a highly innovative railway was created in order to improve economic performance, improve organisation structure, improve technical performance, and change physiological thinking and a potential for growth between partners. The project provided a solution: a higher quality intermodal service by implement internet portal for customers and operations.

Innovations solution of performance	
Economic	Guaranteed opening times and punctuality Compensatory payments in case of delays Creation of flexible schedules Slot sharing Standardized pricing

Organisation structure	Intelligent freight management ensuring a high utilization ratio of trains and a high punctuality of services. One-stop-shopping. Bundling of loading units and goods on different wagon types
Technical	Central planning and pro-active incident management. Implementation of continuous tracking & tracing applications. Intelligent IT-applications that heighten transparency (online booking etc.) Development of a concept to facilitate overland electrification for cooling purposes Creation of a Call Centre
Change physiological thinking	Acceptance of neutral mediator who enables bundling of competitors. Mutual disclosure of information regarding freight demand and utilization ratios.

(Commission, Marco Polo II Programme - Frequently Asked Questions (FAQ), 2013)

The ItaloExpress project reduced a considerable volume of road freight; 135 billion tonnes per kilometres of goods to shifted from the road to rail. These calculations were estimated in periods of four years. This shift and transportation operations have many benefits as already mentioned and contributed an estimate €28.3m over four years of environmental benefits.

The project has been successful because it improved upon punctuality and reliability between Germany and Italy via the rail route. This one done by establishing tracked-and-traced intermodal service, and u: Good point motives wagons, offer flexibility and transport pricing (Conference, 2008).

Common learning actions

Common learning actions creates an awareness, in the logistics network around Europe, by promoting an awareness that transport by road is not the only option, or even the most efficient in freight movement operations. They focus on advances in freight logistics, to improve cooperation between partners. In appraising the Marco Polo programme, the programme encourages member states to work together; thereby, exchanging information, share knowledge, experiences, and learn from each other's experiences. These innovative frameworks add value to Europe as whole as "the needs of the many outweigh the needs of the few" (Armstrong , 2013).

The Marco Polo programme created a training platform for the European members involved with the project: Enterprise-wide Information Technology Architecture (EWITA). The training platform has the latest innovative, multi-language, E-learning platform for Europe's inland waterborne logistics; such as the Danube and Rhine- Meuse-Scheldt routes.

The Marco Polo programme became a key component of the development of logistics programmes around Europe because it created initiatives to educate different parts of Europe with one holistic transport concept for the movement of freight; thereby, creating advantages for partnerships because it creates an integrated standard of performance for all. Standards and regulations such as the creation of the mandatory European Driver Certificate of Professional Competence (CPC) Driver Training programme (Good analysis : learning action also has the aim to train on how to make logistic solutions more sustainable and efficient by considering the Modal Shift Action (Circle S.P.A, 2018).

Traffic avoidance actions

Traffic avoidance actions is when the movement of freight becomes more sustainable by avoiding the unnecessary transportation; such as empty, or not full loads, making loads bigger, full loads both out and in bound, waste reduction measures and reduction in journey distance; thereby integrating freight movements, innovatively, into the production process. This action will benefit the organisation, as it will reduce costs; by using reverse logistics operation, a two-way logistics, rather than one way. The Marco Programme aims to increase, sustainably, social and economic gains; therefore, these gains must not be cost of employment or organisational productivity The Marco Polo Programme was created in order to address the failures in the transport sector concerned with the movement of freight, this failure is created by market changes which occur in a larger scale beyond the European Continent. The economic global crisis has forced logistic companies to become innovative and creative, in order to carry out transport operations in a sustainable and a profitable manner, in doing so, at the same time adapt to changes in the environment and social dynamics of the market place. With the creation of the Marco Polo programme, the European Commission creates a starter point to encourage both private and public sectors to embrace the idea of a partnership in order to achieve a more sustainable efficient transport network system around Europe (European transport policy, 2019)

Conclusion

The Marco Polo Programme helps lift barriers that were constraint innovations in the Logistic industry. Especially in the movement of freight between European member states. Therefore, the Marco Polo has created a single goal to be achieved between the shareholders involved in each individual project. It is vividly, but with the single goal and objectives, plans tend to deliver a desired outcome for all the parties.

The Marco Polo Programme can be appraisal by its own right because it was the only instrument created by the European commission at the time to contribute financially to logistic and transport industries, with the significant importance to reduce greenhouse gas emissions and create an efficient freight transportation around Europe. Therefore, the modal shift action, create awareness and incentive of different options available in the market place concerned with the movement of freight.

The Marco Polo Programme therefore has promoted the development of innovation in technology and investment in the multi modal transport network. The success of the Marco Polo Programme can be modelled by the department of transport in order to create a sustainable and efficient transport network around the country. With the implementations of Catalyst convert action, the use of the water ways in land, traffic avoids actions in order to lose productivity and common learning action is to increase knowledge and awareness of efficient and sustainable freight transportation.

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Innovation created by the Marco Polo Programme

GRADEMARK REPORT

FINAL GRADE

70/100

GENERAL COMMENTS

Instructor

Very good, wide range of research which helped to develop some useful arguments on the topic.

Very good understanding and knowledge demonstrated.

Good analysis but needs to really address the question more "head-on" to achieve higher marks in this area. For instance, even though the report claims that Marco Polo has had some successful outcomes, has it really achieved its objectives as they were set out?

Excellent structure and layout. Arguments presented in a clear, concise manner.

Excellent work. Well done.

PAGE 1

PAGE 2

PAGE 3

QM

Good Intro.

Good introduction

PAGE 4



Comment 1

for example.....

QM

Good point

Good point

PAGE 5

QM

Good analysis

Good analysis

QM

Good source

Good, reliable source

PAGE 6

QM

Good point

Good point

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Good point

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PAGE 7

QM

Good analysis

Good analysis

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Good point

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PAGE 8

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Good point

Good point

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QM

Good analysis

Good analysis

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Comment 2
stakeholders

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