TRANSPLAN

Ingegneria del Territorio e dei Trasporti

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TRANSPLAN is an engineering and consultancy Company, active in the field of Transport Planning and in particular:

- **Transport Engineering and Economy**
- **Traffic Engineering and related simulations with support of mathematical models**
- **Urban and Land Planning**
- **Sustainable mobility with alternative and renewable sources.**

Established in 1987 by leading engineers with wide experience on the domestic and international market, ***TRANSPLAN*** provides the following main services:

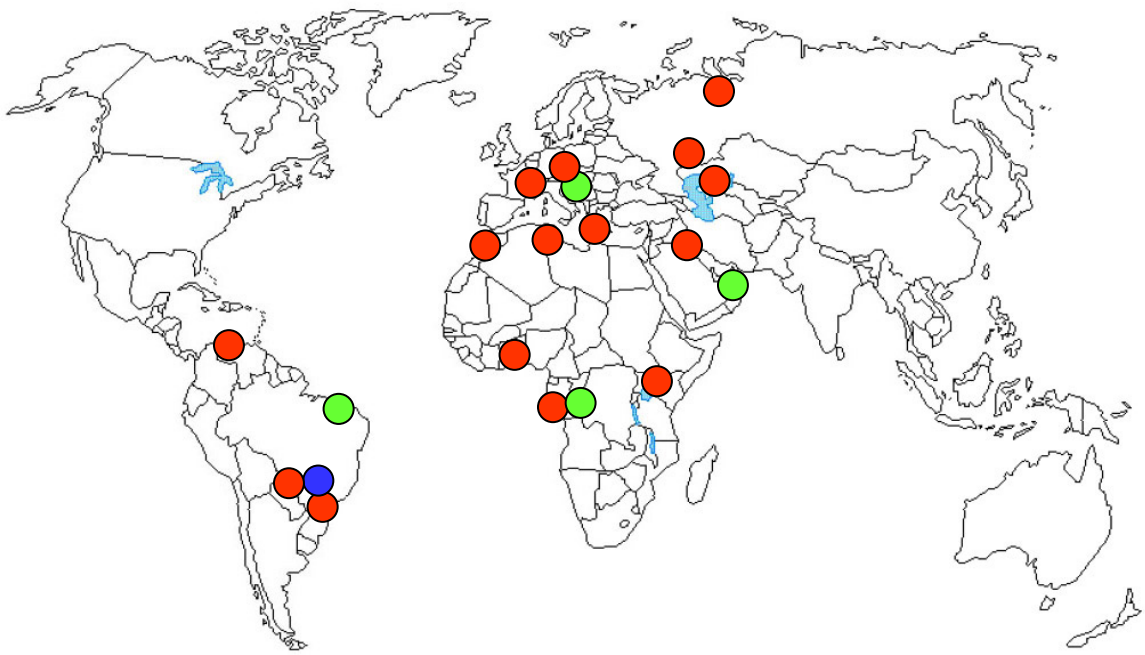
- **Consulting**
- **Planning and Design**
- **Assistance and operational support**
- **Research.**

NATIONAL AND INTERNATIONAL REGISTRATIONS

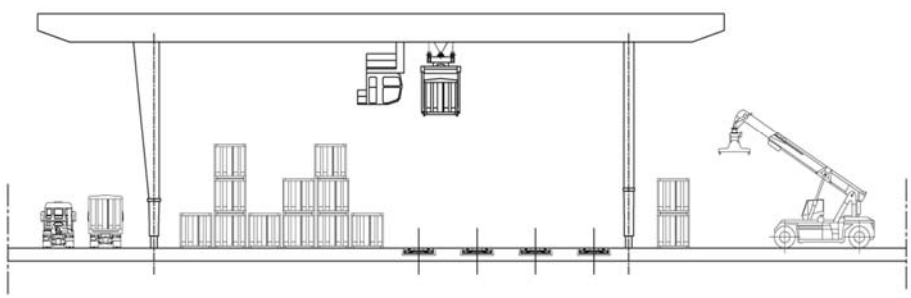
- **EUROPEAN COMMUNITY** - Registration by F.I.B.U. (Fichier des Bureaux de Consultants) by C.C.R. (Central Consultancy Register) since 2000
- **REGIONE LOMBARDIA** – Official engineering supplier (n.1892 – cat. 30.01.02) since 2002
- **SAIPEM S.p.A. (ENI Group)** – Qualified supplier since 2002
- **SEMBENELLI CONSULTING S.p.A**. - Qualified supplier since 2008
- **METROPOLITANA MILANESE S.p.A**. – Qualified supplier (Planning and Design Sector: MMQ_010: 10G-M-N-O-P-Q-S) since 2012.

ENGINEERING

TRANSPLAN has gained deep, extensive and professional experiences in Italy and abroad for technical-economic feasibility studies and for planning-design of transport infrastructures and services.



- **Transport Planning**
- **Transport Infrastructures Design**
- **Multimodal Terminals, Multimodal Goods Centers, Logistic Platforms and Logistic Systems (passengers and goods) to support oil drilling and/or refined products plants**



ENGINEERING

Transport Planning

TRANSPLAN has carried out many projects in the field of the transport and passengers mobility. In particular:

- Surveys and investigation on the vehicular traffic;
- Surveys and investigation of the mobility on the urban and sub-urban public vehicles (counting of aboard/ entry-exit passengers; analysis of the transport quality/comfort; evaluation of the influence area of the stations/stops; etc.);
- Parking demand analysis in urban areas (Brescia, Milan, Bologna), in particular referred to tourist areas;
- Studies regarding the impacts on the road network generated by new residential/ commercial/industrial buildings: Cagliari/Italy, Manoel Island/Malta, Agadir/Morocco, Milan-Rogoredo/Italy, San Donato Milanese/Italy, etc.;
- Technical-economic-financial Feasibility Study for the upgrading of the railway axis Monaco-Verona with introduction of a new base tunnel of Brenner Pass;
- Urban Traffic Master Plan and passengers mobility analysis of Valencia city (Venezuela – 1.600.000 inhabitants). This Study has been financed by the Inter-American Development Bank and Mundial Bank;
- Technical-economic feasibility studies for passengers public transport systems (Brescia, Prato) and in particular regarding innovative transport systems (Rome, Madonna di Campiglio, Cervinia, Sanremo / Italy);
- Planning and evaluation for the urban bus public services (Como, Lecco / Italy) and suburban (Province of Padova, Province of Brescia, High and Central Camonica Valley / Italy);
- Transport & Mobility Plan and Triennial Program of the Services (Province of Brescia / Italy);
- Services program planning for railway lines (Brescia-Iseo-Edolo, Brescia-Cremona, Chiavenna-Colico /Italy);
- Integrated development plan for storage areas in Paranaguà port and for the railway transport in the State of Paranà (Brazil);
- Technical-economic-financial Feasibility Study for the Itaipù dam transposition for waterway navigation (Brazil): goods traffic demand study among the states of Mercosul (Brazil, Argentina, Paraguay, Uruguay) and in particular about the waterway transport of the Rio Paranà, preliminary project with the scope to by-pass the Itapù dam on the Rio Paranà ("vinciane chiuse" system, naval lift, inclined plan, etc.), co-operation with the Liege University (Belgium) - Naval Architecture, Ocean & Harbour Engineering, Sea & Inland Navigation Technics, Transportation System Analysis (Prof. J.Marchal), modal split and traffic assignment to different transport system (roads/railway/sea/waterway);
- Feasibility study regarding a railway shuttle service between France and Italy for the aboard transport of road heavy vehicles, using the new railway tunnel of the Frejus Alpine Pass;
- Impact study on the local road network due to the construction of the new Headquarter Office Building of ENI Company in San Donato Milanese / Italy.

ENGINEERING
Design of transport infrastructures

- **Province of Gorizia (Italy), European Community: CONSPACE Project:** Technical-economic feasibility of the electrification of the railway line in the Vipacco valley (Slovenia).
- **Feasibility verification of the railway link between the Napoli-Cancello line and Cancello-Sarno line (Italy)**, included in the upgrading and development proposals of public transport service for the Pole made by the Campania Multimodal Centre of Nola, the C.I.S. of Nola and the Vulcano Commercial Centre.
- **Milan-Torino High Speed/High Capacity Railway Line, section of Novara (Italy)**: Preliminary technical feasibility study of a new railway link between the Novara-Vignale line and the existing goods terminal Novara-Boschetto.
- **Trolley lines for the cities of Curitiba and Fortaleza (Brasil)**: Technical feasibility and preliminary design.
- **Milan-Verona High Speed/High Capacity Railway Line (Italy)**: Basic design of the railway marshalling yards inside the storage areas to support the construction of the line. Analysis of the interferences between the new line and the existing transport infrastructures.
- **Railway link between Brescia-Airport of Montichiari and the Milan-Verona High Speed/High Capacity Railway Line (Italy)**: Pre-feasibility of a new transport service using some sections of existing railway lines and additional new sections, integrated with the existing service operating on the Brescia-Piadena line. Study awarded by the University of Brescia – Dept. Civil Engineering.
- **Railway link between the North Railway Lines (FNME) and the Italian Railway Lines (RFI) next to the node of Brescia (locality of Mandolossa - Italy)**: Technical feasibility of a new railway entry line in the Brescia Station of the Brescia-Iseo-Edolo line, with abandoning of the existing corridor.
- **Milan-Verona High Speed/High Capacity Railway Line (Italy):** Detailed design of the railway marshalling yards inside the storage areas to support the construction of the line.
- **Milan-Bologna High Speed/High Capacity Railway Line (Italy):** Verification of the detailed design of the remote data acquisition units relevant to the civil works on the Melegnano-Fidenza section.
- **Abu Dhabi new passenger and mineral railway line (Abu Dhabi):** permanent track sizing and stability verification.

ENGINEERING
Goods Multimodal Centers

Planning:

- Goods analysis of Lombardia Region – Italy (1991-1992).
- Feasibility study and preliminary design of the Goods Multimodal Center in the west region of Paranà State - Brazil.
- Multimodal and Logistics Plan - Lombardia Region – Italy (1998-1999).
- Railway Planning of the goods transport in the Sardegna Region – Italy (2002).
- Goods Transport and Logistics Plan in the Province of Cremona – Italy (2004-2005).

Design of railway links and goods multimodal centers:

- Railway branch linking the Ikea-Italia Logistic Centre to Piacenza-Le Mose yard (Italy).
- Railway branch of Cesano Maderno for the Arcese Log – Distrilux Logistic Base (Italy)
- Railway branch of the cement factory of Merone (CO - Italy)
- Railway terminal of the multimodal centre of Battipaglia (SA - Italy)
- Goods Multimodal Centre of Isola della Scala (VR - Italy)
- Integrated Logistic Pole of Mortara (PV - Italy)
- Railway access system of the ports of Livorno and Marghera (Italy)
- Goods railway branch of Rezzato (BS - Italy)
- Railway electrified junction for CEPIM/Parma (Italy).

ENGINEERING
Goods Centers and Multimodal Terminals

ENGINEERING

Logistic Platforms and Logistic System (passengers and goods) to support oil drilling and/or refined products plants

- Planning of the transport and logistics to support the Karachaganak Processing Complex (2001-2007) and the Kashagan Project (2002-2006), oil drilling and production areas in Kazakhstan.
  - Transport Master Plan and Logistics Plan for the oil production activity: passengers/goods demand analysis during the drilling/construction/operating phases; analysis of the transport mode and alternative solutions suggestion for the transportation and the logistics (accommodation camp/warehousing sites, etc.); investment and operating costs evaluation.
  - Pre-feasibility study of a transport system for the personnel working in normal production condition and in emergency condition inside the off-shore oil field of the Kashagan Project and inside the on-shore Eskene West Plant: identify of the more suitable transport system to satisfy the transport demand and to face the required environmental and operating conditions, sizing proposed for the vehicle, fleet and transport services, investment and operating cost evaluation of the transport system.
  - Feasibility study of the best road transport services to face a high workforce demand (bus type and itinerary choice, planning of the required support infrastructures, operating transport service); capital expenditures (CAPEX) and operation expenditures (OPEX) analysis.

- Planning of the transport and logistics to support the oil production fields in Congo, Ghana, Iraq, Russia/Siberia, Tunisia, Uganda.
  - Analysis of the workforce/goods transport demand foreseen for the different on/off-shore projects.
  - Analysis of the transport infrastructures and logistic facilities existing in the study area (ports, railway network, road network, airports, warehouses, accommodation facilities, etc.)
  - Transportability study of the Out Of Gauge equipment
  - Definition and sizing of alternative transport/logistic solutions
  - Multi-criteria comparison and identification of the best solution from the technical/economic point of view.

ENGINEERIG
Alternative and Renewable Energy

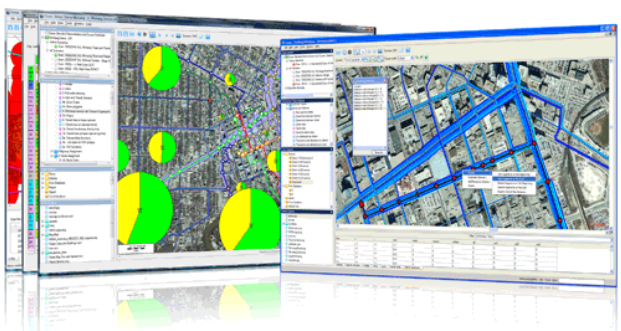
- Technical-economic feasibility studies for bio-diesel production: localization and sizing of the areas of cultivation of oil plantations, analysis of the best solution to transport all required/produced materials, engineering and technological analysis of the bio-diesel production plant (trans-esterification), investment and operating costs evaluation (Brazil, Congo, Angola 1988-2009)
- CIVITAS European Community Project - Clean and Energy Efficient Public Transport Fleet (2011-2012): costs/benefits analysis to support the measures/actions proposed for the city of Brescia (use of electric buses fed by photovoltaic plants and/or by methane with low emissions; car pooling; car sharing; etc.)
- Consultancy at high technological content for the tar sands cultivation (Congo 2008-2010):
  - Feasibility study for the production of tar sands from different quarries locations: estimation of the material quantities to be moved, sizing and localization of the support areas/facilities (storage areas, logistics, etc.), analysis of the different road itineraries among the quarries and the asphalt production plant, analysis of the different extraction types, definition of the best solution for the extraction and transport, technical-economic analysis, risk analysis (hazard identification study), elaboration of the term of reference for the tender.
  - Analysis of the asphalt quality obtained with the use of tar sands (mix-design optimization, analysis of the laboratory tests and assistance to the production testing at the asphalt plant in Congo).
  - Assistance during the procurement of a asphalt plant suitable to use the tar sands (definition of the term of reference for the tender; technical analysis of the constructors proposals).
  - Supervision of the works during the preparation/extraction/ environmental restoration phases, included the access road construction and the material transport.

SOFTWARE TOOLS
Traffic Simulations

TRANSPLAN is able to supply products in the transport planning and design, supported by software tools with very high quality and with interesting and various analysis of the results.
These tools are used to operate at different levels of the transport planning (strategic, tactic, environmental, operating, etc.), in order to verify the more suitable design of the transport infrastructures/services.

TRANSPLAN is using usually the "EMME/3" software, the traffic simulation tool, developed by "Centre de Recherche sur les Transports" - Université de Montreal - Montreal (Canada).

- Light Transit System of Brescia – Italy : demand analysis (1988-1992-1994).
- Palasport of Milan – Italy: safety project (1989-1990).
- Traffic impact on the city of Brescia during the Light Transit System construction and estimation of the polluted emissions – Italy (1989).
- Light Transit System of Brescia: extension in Valtrompia – Italy (1990-1991, 1998-1999).
- Simulations of the national systematic railways passengers demand – Italy (1992).
- Public transport network asset in the city of Brescia – Italy (1996)
- Study of the vehicular traffic on the tunnel of Borgo Vico (CO) – Italy (1997)
- Analysis of the mobility in support to the Urban Traffic Plans and Traffic Studies for the Municipality of Abbiategrasso (MI), Barzanò (LC), Cernusco sul Naviglio (MI), Vimercate (MI), Grumello Gorlago (BG), Morengo (BG), ect. - Italy.



EMME

INRO

TRANSPLAN: license n. E088
INRO Consultants Inc.
Montreal, Canada

CLIENTS

Public Organizations and Municipalities

- Artigianservice S.r.l. – Legnano (MI) - Italy
- Assoservizi Legnano S.r.l. – Legnano (MI) - Italy
- Azienda Servizi Municipalizzati (ASM); from 2002 Brescia Mobility – Brescia – Italy
- Consorzio Trasporti Nord Milano (CTNM) – Desio (MI) - Italy
- Ferrovie dello Stato - Italian Railways – Local Transport Division – Milan - Italy
- Ferrovie Nord Milano – Engineering (FNMI) – Milan - Italy
- Municipality of Abbiategrasso (MI) - Italy
- Municipality of Bologna - Italy
- Municipality of Brescia - Italy
- Municipality of Castelfranco Veneto (TV) - Italy
- Municipality of Castiglione delle Stiviere (MN) - Italy
- Municipality of Como - Italy
- Municipality of Madonna di Campiglio (TN) - Italy
- Municipality of Padova - Italy
- Municipality of Pinzolo (TN) - Italy
- Municipality of Pontevico (BS) - Italy
- Municipality of Prato - Italy
- Municipality of San Fermo della Battaglia (CO) - Italy
- Municipality of Seriate (BG) - Italy
- Municipality of Schio (VI) - Italy
- Municipality of Valtournanche (AO) - Italy
- Province of Brescia - Italy
- Province of Cremona - Italy
- Province of Gorizia - Italy
- Province of Padova - Italy
- Regional Union of Lombarda – Trade, Tourism and Services – Milan - Italy
- Regione Lombardia - Transport and Mobility Department – Milan - Italy
- Transport Secretariat of the State of Paranà – Curitiba, Brazil

CLIENTS

Private Clients

- Arcese Trasporti S.p.A. – Arco (TN) - Italy
- CEMAT, Combined Transport Management & Transport – Milan - Italy
- Cogefarimpresit S.p.A. – Milan - Italy
- Combitec Srl – Milan - Italy
- Consorzio PIP Le Mose – Piacenza - Italy
- Copel – Electric Company of the State of Paranà – Curitiba - Brazil
- ELC Electroconsult S.p.A. – Milan - Italy
- Fiat do Brasil/New Holland - Curitiba - Brazil
- Fiatengineering S.p.A. – Torino - Italy
- Fiatimpresit S.p.A. – Milan - Italy
- Gruppo CLAS – Milan - Italy
- IKEA Italia Distribuzione S.p.A. – Carugate (MI) - Italy
- Impregilo S.p.A. – Milan - Italy
- Italferr S.p.A. – Rome - Italy
- Milano Logistica S.p.A. – Milan - Italy
- Milano Parcheggi e Servizi S.p.A. – Milan - Italy
- ONT-Magazzini Generali S.p.A. – Milan - Italy
- Polo Logistico Integrato di Mortara (PV) - Italy
- Piacenza Intermodale Srl - Piacenza – Italy
- Reset 2000 S.r.l. – Rome - Italy
- SAIPEM S.p.A. (ENI Group) - San Donato Milanese - Italy
- Saipem Energy Services S.p.A.(ENI Group) - San Donato Milanese - Italy
- SC Sembenelli Engineering – Milano - Italy
- Scarl ASG of Consorzio CEPAV UNO – San Donato Milanese - Italy
- SDA Bocconi – Area Strat.egia – Milan - Italy
- Sibem S.p.A. – Bergamo - Italy
- Sina S.p.A. – Milan - Italy
- Sintesi S.p.A. – Gestione Parcheggi - Brescia - Italy
- Snamprogetti S.p.A. (Eni Group) – Milan - Italy
- Technital S.p.A. – Verona - Italy
- Tractebel Development Engineering – Bruxelles – Belgium
- Transystem S.p.A. – Milan - Italy