



International Association of Public Transport
Union Internationale des Transports Publics
Internationaler Verband für öffentliches Verkehrswesen
Unión Internacional de Transporte Público



10th UITP Training Programme

**2nd Module:
Public Transport
Management and
Customer Relationships**

**Santiago de Chile,
27 – 29 February 2012**

*The contribution of PT to
sustainable development*

Salt Lake City, Utah



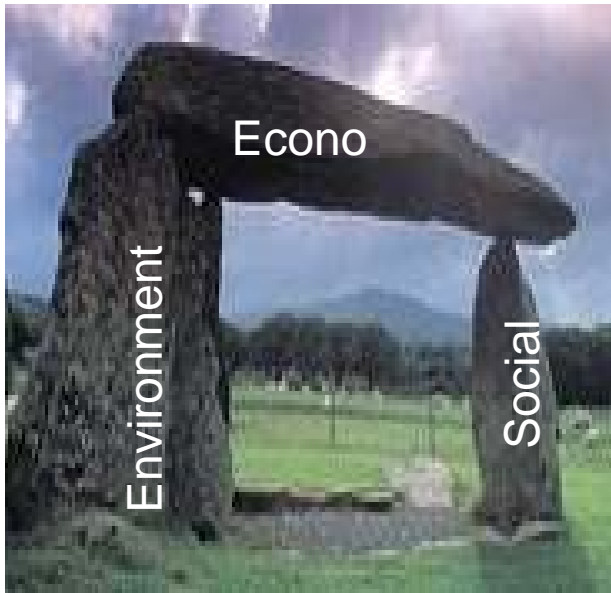
Agenda

1. Sustainable development - What is it?
2. How is this concept related to public transport?
3. What are the stakes for developing sustainably and where can PT be part of the solution?
4. UITP Charter
5. How do PT operators manage SD ?
6. Examples from UITP Sustainable Development Charter Signatories and Transport Lausanne
7. Added value of SD
8. Difficulties
9. Let's build a strategy !

1. Sustainable development - What is it?

Three pillars:

SD is the development of a society or an enterprise that grows economically taking into account its impact on the environment and its social responsibility ...



Environment: to manage/preserve natural resources (water, fuel, wood etc), to minimize the contribution to any type of contamination

Social: to enhance the quality of life, to combat poverty, to provide decent jobs to contribute to cities development.

Economic: to develop, make profit and reinvest that profit; to contribute to the economic development of a region, a country (the world)...

Governance is also a key to success

2. How is this concept related to public transport?

2 dimensions

A. External – A sustainable transport system

B. Internal – A sustainably managed company

A. Definition of sustainable transport

A sustainable transport system is one that:

- allows the basic access and development needs of individuals, companies and societies to be met safely and in a manner consistent with human and ecosystem health, and promotes equity within and between successive generations;
- is affordable, operates efficiently, offers choice of transport mode, and supports a competitive economy, as well as balanced regional development; and,
- limits emissions and waste within the planet's ability to absorb them, uses renewable resources at or below their rates of generation, and uses non-renewable resources at or below the rates of development of renewable substitutes when minimizing the impact on the use of land and the generation of noise.

B. A sustainably managed company



is a company which:

- Controls its impact on the environment
- Manages its human resources well and fulfils its social responsibilities
- Preserves economic growth and balance

3. What are the stakes for developing sustainably and where can PT be part of the solution?

Demographics (ref. United Nations)

2011: 7 bio people \longrightarrow 2050: 9 bio

+ 1 bio in 12 years

50% live in cities

Now: 20 megacities > 10 mio people

2025: 40 megacities (mostly in Asia and Africa)

Consequence:

More than half the world now lives in towns and cities

→ The demand for mobility will increase, consumption of resources will increase, the need for space will increase, poverty will increase...

PT is the ONLY answer for cities of this size

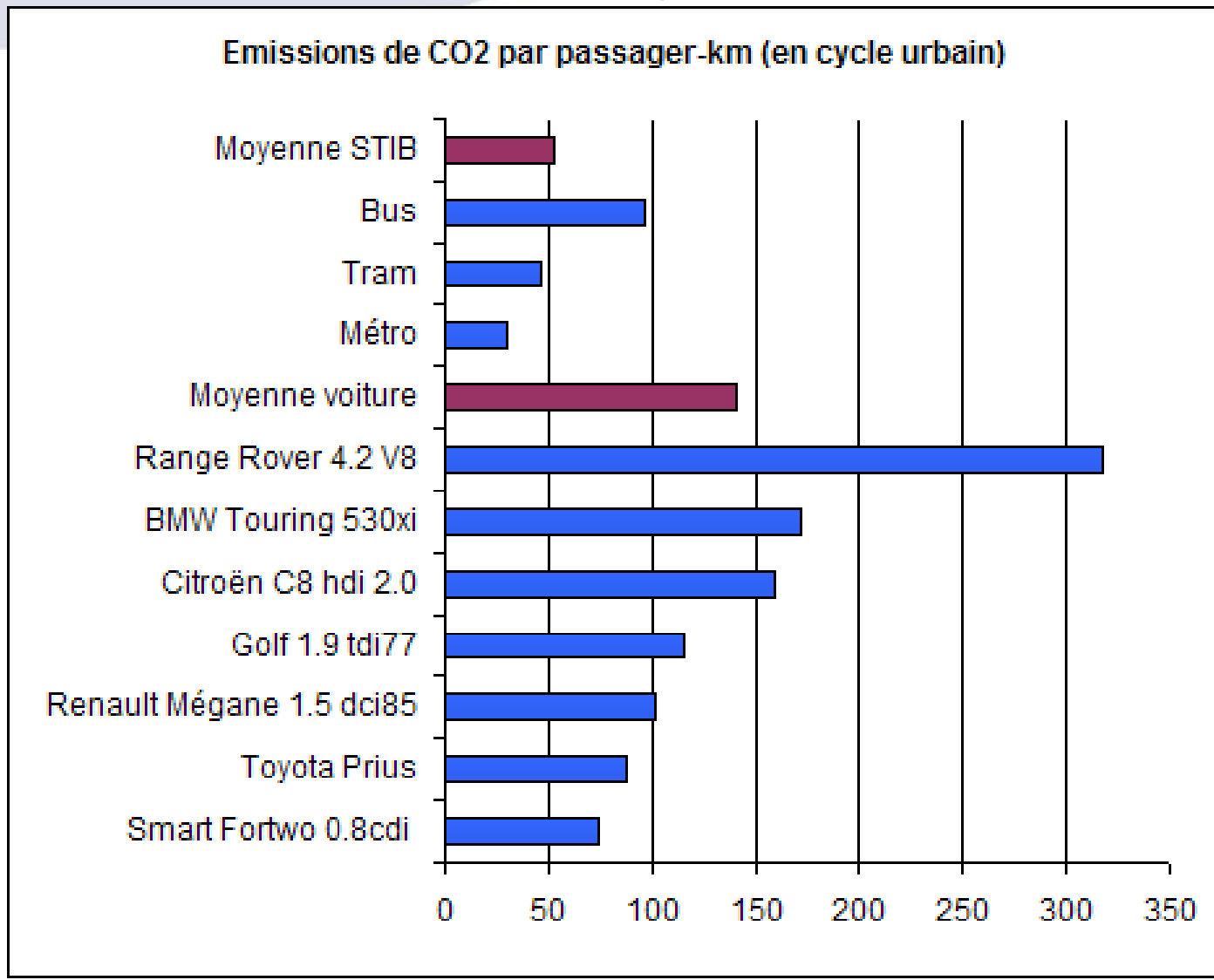
3. What are the stakes for developing sustainably and where can PT be part of the solution?

Environment

- **Climate change: Transport is responsible for 23% of the CO2 emissions in the world (UNFCCC)**
- **Natural non renewable resources: 98% of all land transport depends on fossil fuels**
- **Air contamination USA : Particulates from traffic**
- **21000 people die prematurely/yr – damaged: \$139 billion in 2010** (source : Clean Air Task Force Feb 2005 – diesel and health in America)
- **Europe (A, F, CH): air pollution causes 6% of the mortality (more than 4000 people/yr), half of it due to urban traffic (also 25000 new cases of chronic bronchitis and 500000 crisis asthma!)** (source :Künzli et al – Künzli 2000)
- **Scarcity of land - especially in urban areas**

3. What are the stakes for developing sustainably and where can PT be part of the solution?

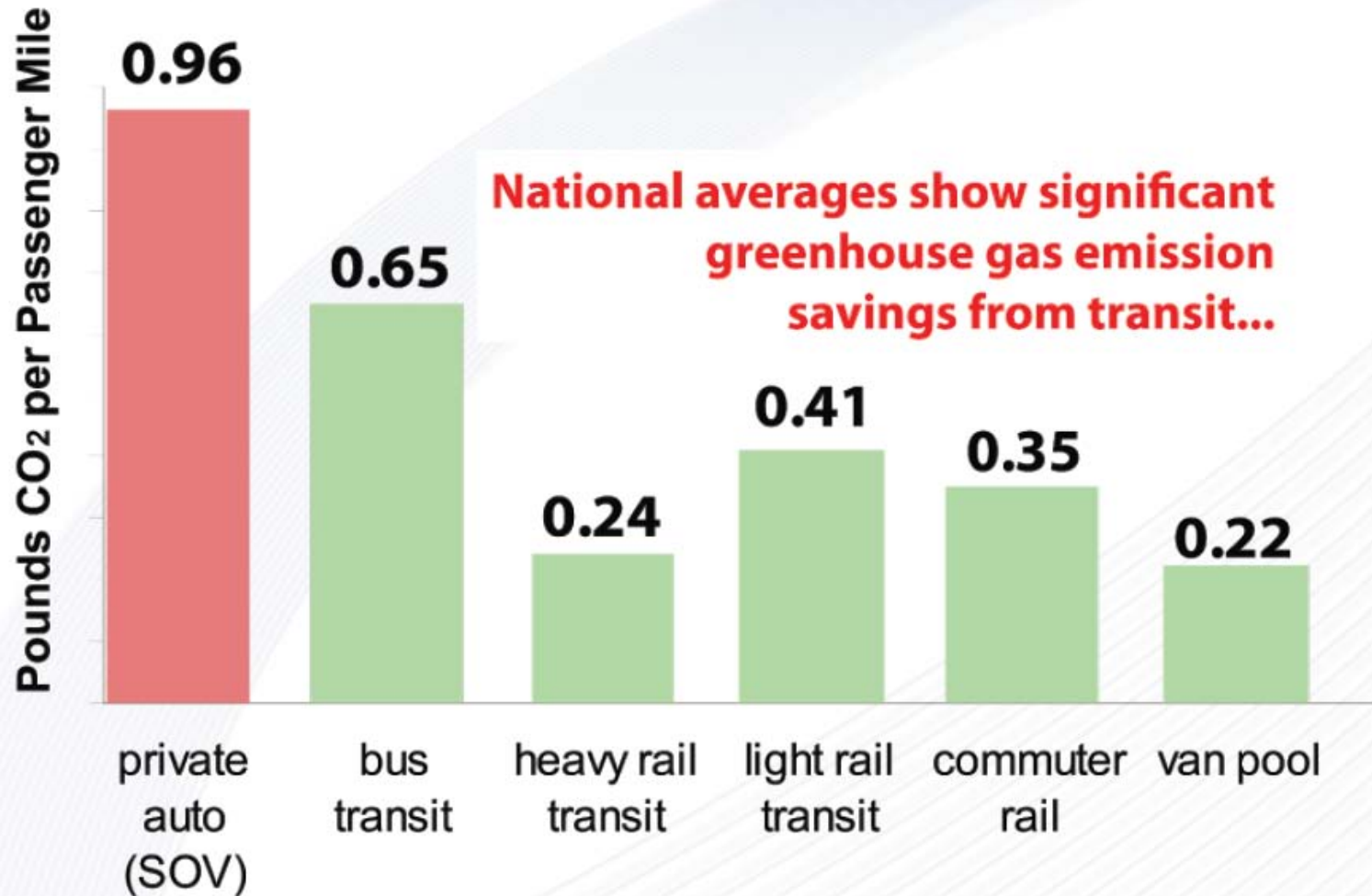
A car dominant society is not sustainable



Source:
CO₂ logic-
STIB

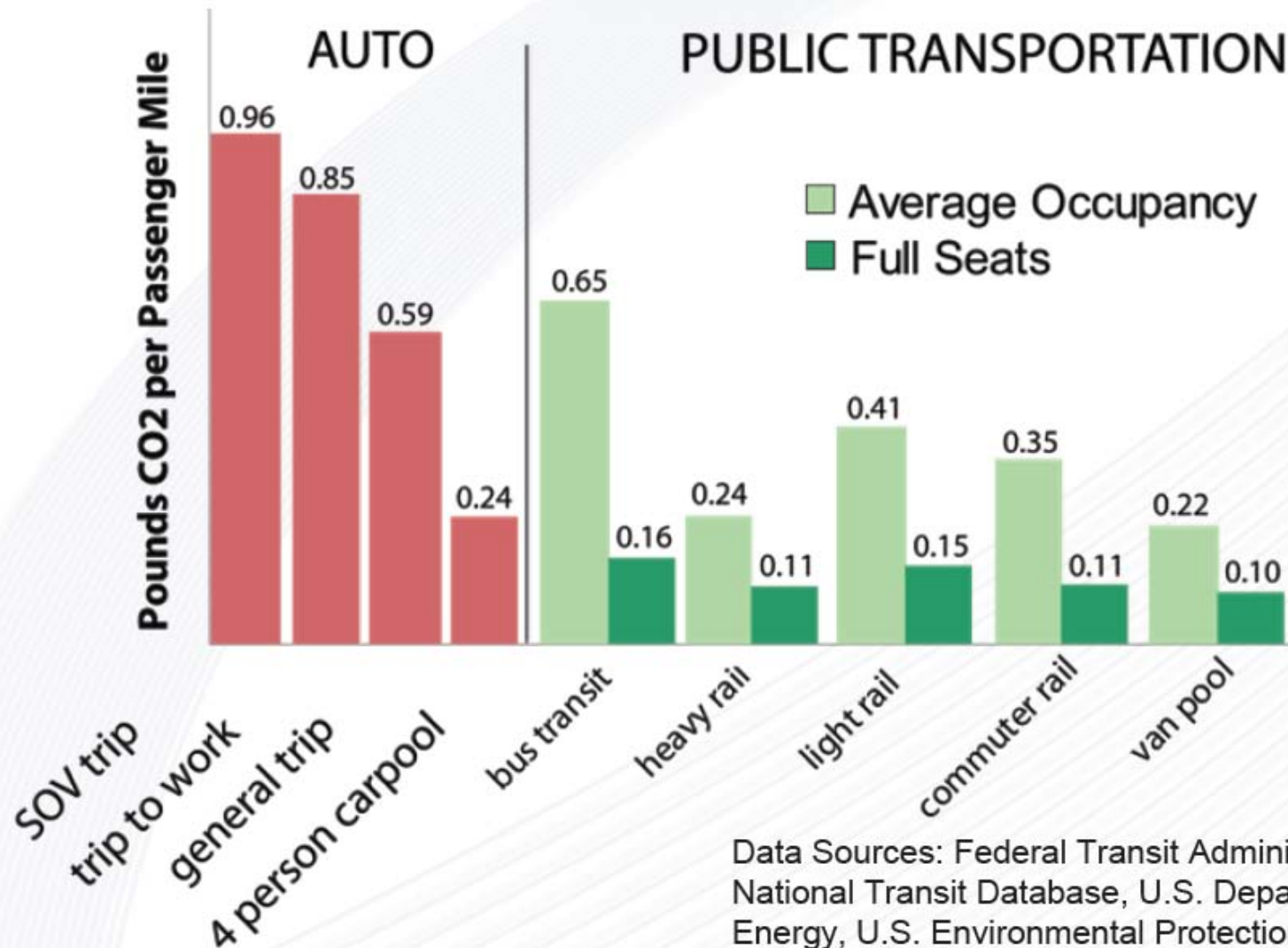


CO₂ Emissions per Passenger Mile



Data Sources: Federal Transit Administration 2007 National Transit Database, U.S. Department of Energy, U.S. Environmental Protection Agency

Number of Transit Riders Greatly Impacts Emissions



3. What are the stakes for developing sustainably and where can PT be part of the solution?

PT is more energy efficient and ... uses less urban space

Tl, Lausanne

1 tl-passenger emits up to 4 X less CO₂ and if uses trolleybus, till 10X less compared to the same trip by car.

Transport volume of public and private transportation vehicles:



4. UITP Charter on Sustainable Development

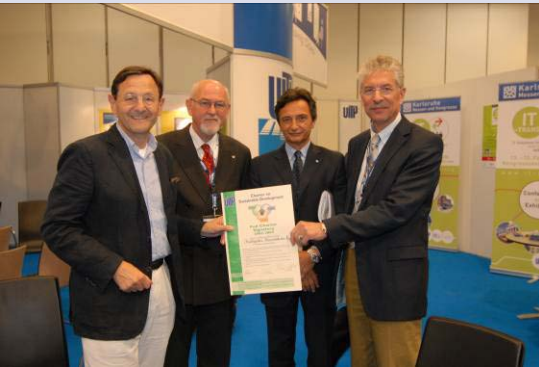
- The charter focuses on how UITP member organisations are performing in social, environmental and economic terms.
- Launched at the UITP World Congress in May 2003 with 33 pioneer signatories now **160+ organisations have signed**
- Worldwide exchange of experience and best practise
- Voluntary but measurable commitment
- UITP uses examples in its international work with UN etc.





3 Levels of entry to the charter

- **Full signatories** are able to demonstrate that they are already engaging in sustainable development, (e.g. systems in place to report on their sustainable development performance within a time frame).
- **Pledge signatories** commit to putting in place reporting and processes that will bring them into line with full signatories. They choose how quickly this is done **but** should provide UITP estimate timing – UITP has developed products to help them achieve this.
- **Associations**
- More details on www.uitp.org



Some Signatories – Total +/- 150

Who?



Transports Metropolitans
de Barcelona



BOMBARDIER



SVENSKKOLLEKTIVTRAFIK



دائرة النقل
DEPARTMENT OF TRANSPORT



≡ provincie
Gelderland



How to use the framework

LEVEL 1

Mandatory Core Requirements

Operators

Authorities

Industry

LEVEL 2

VOLUNTARY

Governance

Environmental

Economic

Social

Each signatory must choose a minimum of 3 indicators from each cluster.

Members are proud to be a charter signatory

UITP Charter on Sustainable Development Charta für eine nachhaltige Entwicklung

The cooperation of the UITP member organizations and DVB is based on the principle of sustainable development. This is a goal of the UITP Charter on Sustainable Development. The cooperation is based on the principle of sustainability and aims to be a model for other transport operators.

- Adopting the Charter as a model for other transport operators
- Preserving safety and health
- Maintaining high quality
- Enabling innovation
- Autonomous and independent
- Sustainable and Green
- Efficient and effective
- Enabling innovation

SOCIETY GESELLSCHAFT

ENVIRONMENT UMWELT

- Reducing the impact on the environment
- Using resources efficiently
- Conserving energy and resources
- Reducing greenhouse gas emissions
- Using alternative fuels
- Using alternative technologies

ECONOMY WIRTSCHAFT

- Expanding and maintaining the T as a mode of transport
- Developing the economy with the T
- Developing the company's business
- Developing the company's business
- Developing the company's business

To act in a sustainable way is a core function of DVB. DVB is committed to the principle of sustainability. This is a goal of the UITP Charter on Sustainable Development. The cooperation is based on the principle of sustainability and aims to be a model for other transport operators.



HOCHBAHN – the sensible alternative

The Hochbahn (Hochbahn) is a modern, efficient and sustainable mode of transport. It is a sensible alternative to other modes of transport. The Hochbahn is a modern, efficient and sustainable mode of transport. It is a sensible alternative to other modes of transport.



Activities and Goals: Industry and Business Partners

Partners and Publications

The UITP Charter on Sustainable Development is a key document for the industry and business partners. It outlines the goals and activities of the industry and business partners.



UNDERTAKING MANAGEMENT

The STIB as signatory to the UITP Charter

The STIB is a signatory to the UITP Charter on Sustainable Development. This is a goal of the UITP Charter on Sustainable Development. The cooperation is based on the principle of sustainability and aims to be a model for other transport operators.



emissions from engines by as much as 10%. NYC Transit plans to retrofit the rest of the fleet by the end of 2005. In 2005, 750 new buses have been delivered with particulate filters.



One of NYC Transit's 180 hybrid-electric buses.



UITP representative Petra Müller looks on as NYC Transit President Lawrence G. Reuter displays his signature on UITP's Charter on Sustainable Development.

5. How do PT operators manage SD ?

- UITP charter signatories commit to monitor, measure and report on their own performance (now via the new reporting framework)
- Full strategy based on stakeholders consultation (STIB, Brussels)
- Full strategy based on risk approach (Hong Kong)
- Many PT operators are involved in SD projects approach without any formal decision (tl) or strategy and therefore also miss its 'added value'

IDENTIFY

Identify economic, social and environmental risk (Risk Register).

SOCIAL RESPONSIBILITY
ENVIRONMENTAL RESPONSIBILITY
ECONOMIC RESPONSIBILITY

An example

PRIORITISE

Determine the relative severity of economic, social and environmental risks in parallel.

SOCIAL RESPONSIBILITY
ENVIRONMENTAL RESPONSIBILITY
ECONOMIC RESPONSIBILITY

High
Frequency
Low
Consequence
High
Priority Risk

MONITOR AND REPORT

Monitor implementation and effectiveness of actions. Internal and external reporting.

- Risk management process fit for the purpose intended
- Choice of indicator to measure risks
- Relevance and effectiveness of the risk mitigation measures chosen
- Allocation of resources to mitigate risks
- Achievement of targets

ACTION

Determine ownership, agree mitigation or opportunity and assign indicators for priority economic, social and environmental risks.

SOCIAL RESPONSIBILITY
ENVIRONMENTAL RESPONSIBILITY
ECONOMIC RESPONSIBILITY





6. Examples from UITP Sustainable Development Charter Signatories

Low carbon and renewable energy use

Lille, France :

Largest Biomethane and CNG city bus fleet in Europe

Part of the EU project BiogasMax

Waste sludge to be made into biogas is brought by barge (water) and the bus depot is located next door to the biogas plant

'Double' benefits from waste disposal; reduction of direct methane into the atmosphere and transport energy

Results show reliability of gas buses; cost per kilometre equal to or less than that for diesel buses and a higher contribution to the environment



Bio-Methane facility in Lille, France



Bio-Diesel powered bus in Lille





6. Examples from UIP Sustainable Development Charter Signatories

Reducing CO2 emissions



Stockholm Public Transport – SL

100% renewable for all PT by 2050

→ Metro, Buses (2 000), Commuter trains, high speed trams...2.4 million trips / day

→ Rail Traffic - **SL only uses electricity made from renewable sources (wind, water, biomass)**

2004: 100 % (100)

→ Bus Traffic

25 %	2006
50 %	2015
75 %	2022
100 %	2030



6. Examples from UITP Sustainable Development Charter Signatories

Reducing CO2 emissions

Just taking public transport helps...per year.

PARIS RATP services **alone** annually avoids **2 million tonnes CO2e**

Metro - LISBON : annual passenger kilometres made by metro in Lisbon Metropolitan Area => **79, 000 ton CO2e**

Light Rail – e.g.CALGARY: light rail system that uses hydroelectric power avoids **26,000 tonnes CO2e**

MUNICH : **12,000 tonnes CO2e** avoided with soft policies to change behaviour (changing one or two car trips to PT and NMT and letting people know closest PT services when they move house)

NEW TECHNOLOGY: CPT, Naples uses photovoltaic panels on bus depots provide enough energy to run 4 of the trolley bus fleet



The Utah Greenhouse Gas Reduction Goal is to reduce GHG emissions to 2005 levels by 2020 – a 28% reduction over business as usual.



2005-2006 Vehicle Idling and Emissions Savings

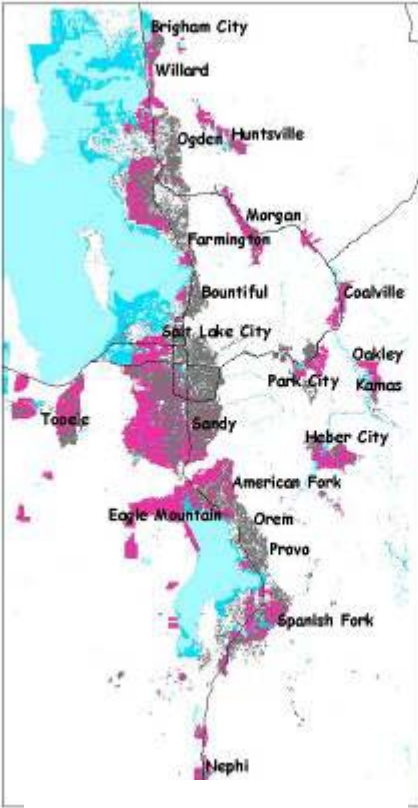
Air Quality

CO₂: 3.037 million lb/yr
NO_x: 91,125 lb/yr
PM: 2484 lb/yr

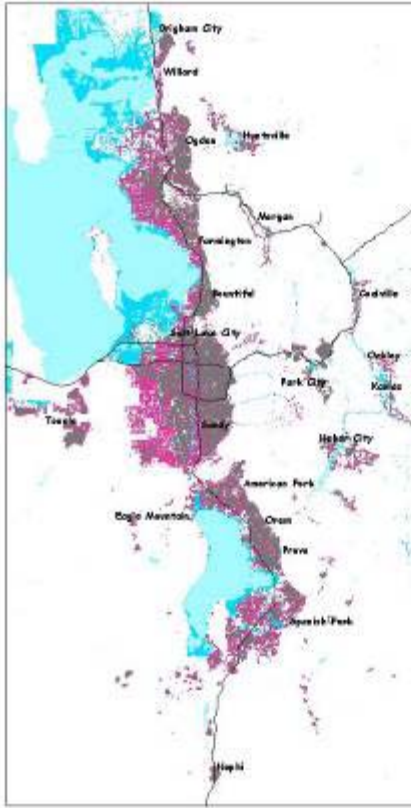
Fuel: \$675,000.00

Labor: \$63,000.00

Envision Utah – Four Options



Scenario A:
Continuation of
Recent Trends



Dispersed
Development
Pattern



Scenario C:
Growth on new
land focused into
walkable, transit-
oriented
communities



Scenario D:
Significant
increase in
densities
Extensive infill and
redevelopment

ENVISION UTAH
A Partnership for Quality Growth

Scenario D

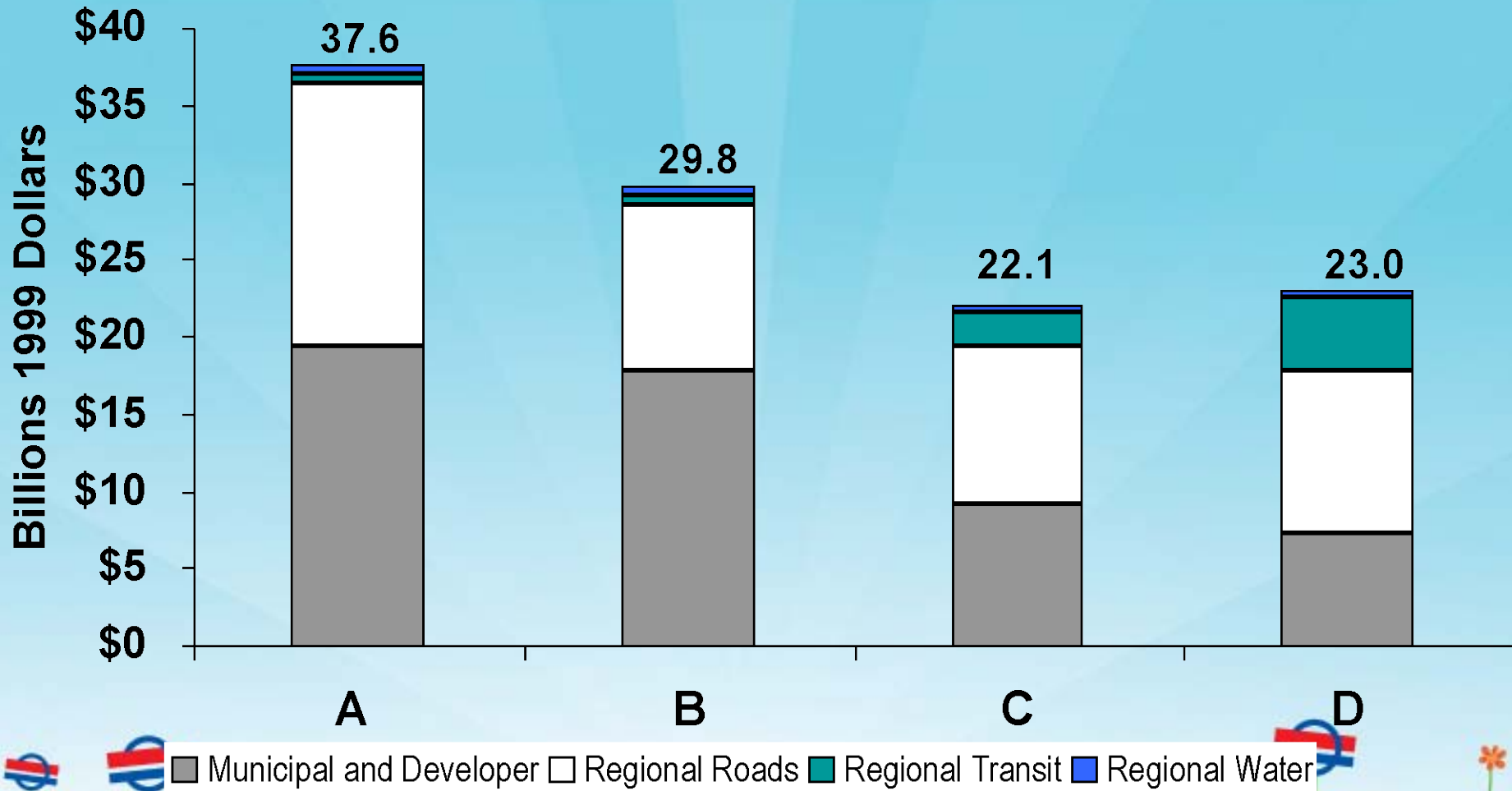
Legend

- Development (Pink)
- Existing Development (Grey)
- Water Bodies (Light Blue)
- Wetlands & Floodplain (Dark Blue)

Fregonese
Calthorpe
Associates
Regional and Urban Planning



Total Infrastructure Costs



The 3% Strategy

Targeted Land-Use Changes

If we allow one-third of our future homes, jobs and stores to go on three percent of our region's developable land, linked by a world-class transportation system, we will...

Big Quality- of-Life Benefits

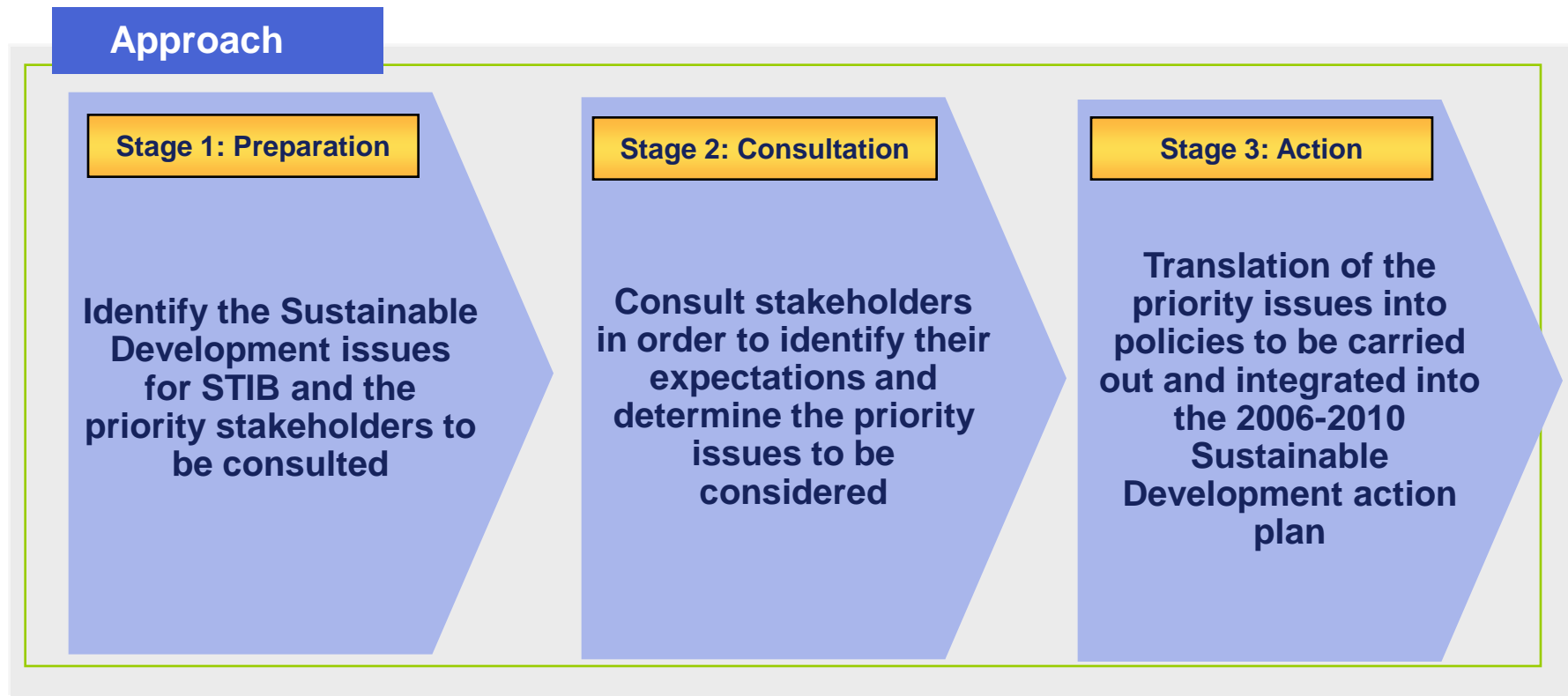
- Improve air quality,
- Save billions of dollars,
- Reduce traffic congestion,
- Preserve our key open spaces,
- Use less water,
- Create vibrant communities and gathering places, and
- Respond to market demand for more choices for living, working, commuting, shopping and playing.

3%

6. Examples from UITP Sustainable Development Charter Signatories

The example of STIB

The preparation of the plan comprises 3 successive stages, each including a certain number of associated activities. Stage 4 is the definition of indicators



6. Examples from UITP Sustainable Development Charter Signatories

The example of STIB

- Energy strategy
- Communication campaigns about SD
- Noise management (trams)
- Environmental management (to recycle waste, to reduce water consumption, to prevent soil contamination, eco-building etc.)
- To promote diversity (gender, culture, age)





Sauvez la banquise, adoptez plutôt la STIB.

Avec des bus équipés de filtres à particules ou roulant au gaz naturel, ainsi que les trams et métros alimentés à l'électricité, la STIB permet d'économiser 100.000 tonnes de CO₂ par an.

Bougeons mieux



Sauvez la banquise, adoptez un iceberg.



The polar tramway



Economic advantages (Energy savings)

- People detection on escalators
Savings 20.000 kWh/an-esc. = 840.000 €
- Natural light detectors
Savings : 800.000 kwh/yr= 56.000 €
- Replacing of transformers, increasing 1% efficiency
Savings 265.000 kWh/yr = 66 t CO2 = 18.550 €
- Relighting
Savings 128.000 kWh/yr = 32 tons CO2 = 9.000€
- Eco-drive underground
Savings 17% energy

Economic advantages for STIB...

Agreement with the authority to have the following benefits:

- 250.000 €/year for each new site concerned by a SME and maintain SME in already certified sites
- 600.000 €/year financing free-offer in case of air-pollution peaks. If no peak, the 600.000€ will be invested in environmental actions

This could provide a dedicated budget for the SD action plan ...

6. The example of Transport Lausanne

PT contributing to the SD of a region

Some facts and figures about TI

- 95 millions trips (ridership 2010)
- > 200 millions km-passenger/year
- 10 trolleybus lines, 2 metros, 24 bus lines (natural gas and diesel)
- >1000 employees (650 drivers)

6. The example of Transport Lausanne

PT contributing to the SD of a region

SD is mentioned in the 2010-2013 business plan

- Energy, environmental management and sustainability audits (2010-2011)
- Eco-driving (result: 4% fuel savings)
- tl as a trainer for students
- tl metros and trolleybus run by 100% hydraulic electricity (also in the buildings and workplaces)
- Enhance attractiveness of PT

Social topics:

Some unique working practices, the ATT concept, the driver chooses his schedule (absenteism reduced by 31%)

Implementing values (Fortl)

etc.

6. The example of Transport Lausanne

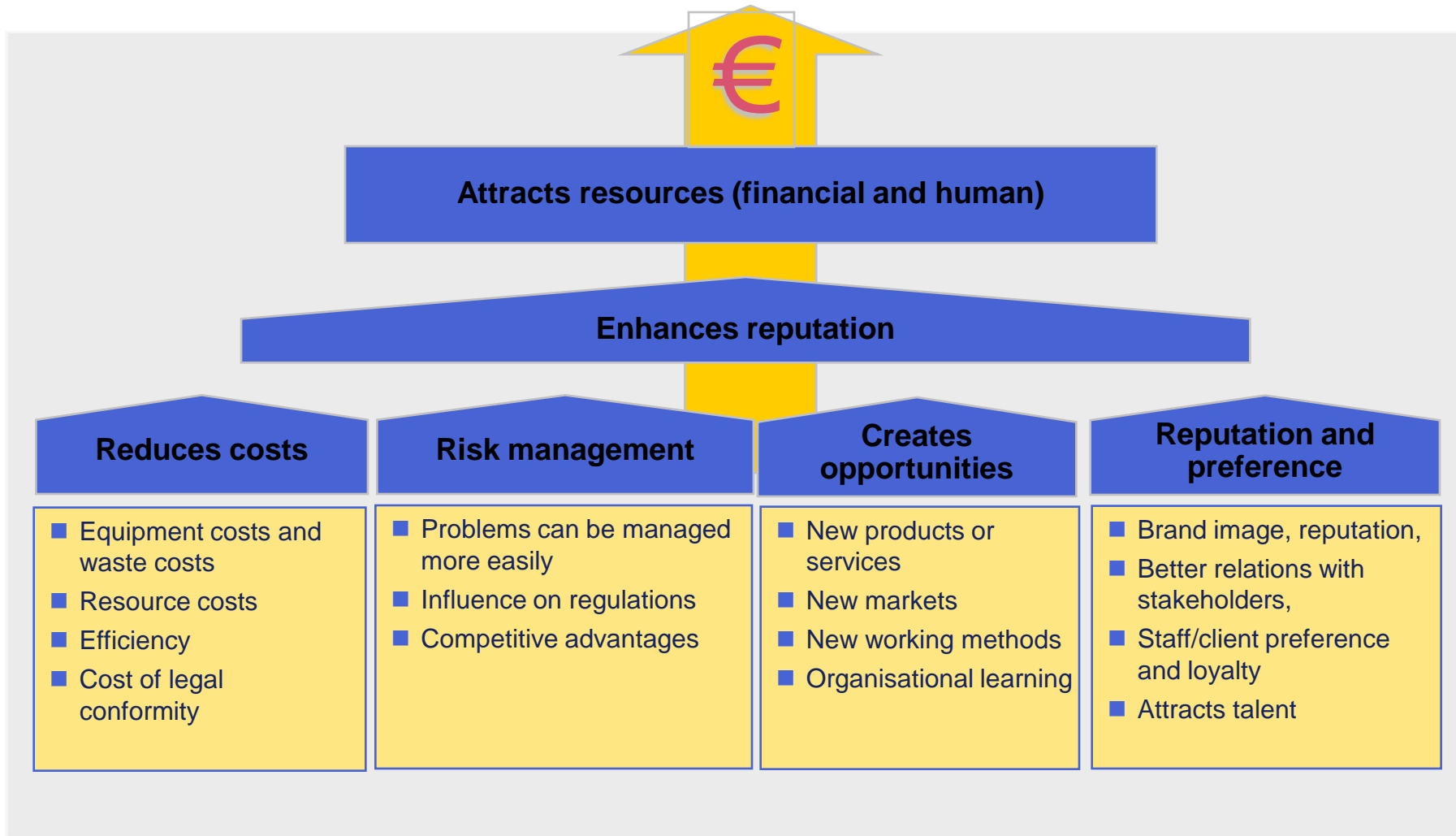
PT contributing to the SD of a region

'Projet d'agglomération' Regional project of Lausanne-Morges 2020

- Targets: +70,000 inhab+empl (total 250,000 in 2009)
- Development in strategic areas
- Urbanization by densification
- +44% commuters in PT (morning peak hour)
- tl is defining the offer in close collaboration with the municipalities taking into consideration the strategic zone and anticipating densification
- Under these conditions, PT projects are financed by the confederation (up to 40%) + Canton
- Reference: <http://www.palm.ch>

7. Added value of sustainable development

Sustainable development policies can bring added value to the company in four different ways



8. Difficulties to implement SD that are mostly mentioned

- SD is a rather abstract concept for many people
- Investments in environment cost money and the return on investment is sometimes long – no immediate profit
- SD management needs a transversal and multicriteria approach
- Most of the profits of SD management are difficult to quantify
- Citizen consultation/implication is quite a new process
- More a mean of thinking – difficult to change habits
- Suppose transparency

Let's talk together...

And what about your company ?

7. Let's build a strategy

JOIN THE CHARTER!! Do you know if your organisation is a signatory?

You are a PT operator and want to develop a SD strategy

1. Identify the main stakeholders you'll consult
2. Identify challenges you'll have to face (take into consideration the three/ four pillars)
3. Identify an action plan (at least 1 measure for 1 identified challenge)
4. Identify the advantages
5. Think about communication....

Thank you!



Contact :

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www.uitp.org

Opportunities for UTA because of ISO 14001 and 9001

Member of the Utah Pollution Prevention Association

Partner Level Member of Clean Utah

Member of the Utah Clean Cities Coalition

Founding Reporter of The Climate Registry

UTA chairs a local Interagency Sustainability Group

Founding Signatory of APTA's Sustainability Commitment

Full Signatory Member of the UITP Charter on Sustainable Development



UTA Became First ISO 9001 and ISO 14001 Certified Transit Agency in December 2005



Quality
Endorsed
Company



Certified
Environmental
Management

