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Departement Architektur der ETH Zürich

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trans

Band I – Triebkräfte der Architekturentwicklung

Mobilität und Architektur

- Moderner Nomadismus / Wohnmobil-Gemeinden
- Einflüsse der NEAT auf die Struktur der Innerschweiz
- Abhängigkeiten und Einflüsse von Individualverkehr

Globalisierung

- Fragmentierung des Territoriums
- Bauen in China / Grenzen des Architekturtransfers

Städtebau

- Chancen / Grenzen und Ineffektivität urbaner Planungen
- Warenflüsse / Logistik und ihr Einfluss auf Urbanität
- Strategien zur Stadtentwicklung jenseits der Moderne
- Identitätsverlust durch urbane Transformationsprozesse

Ressourcenhaushalt

- Strategien zur Nachhaltigkeit in Architektur und Städtebau
- Abhängigkeit der Städte von transnationalen Energienetzen

Bewegte Grenzen

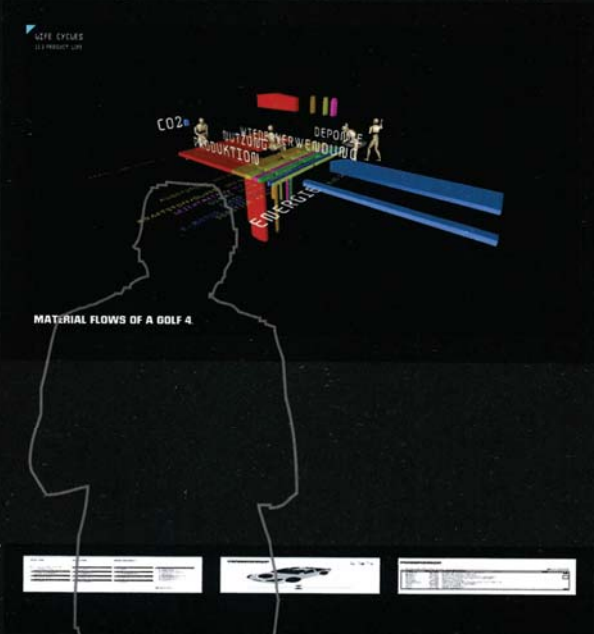
- Architektonische Strategien für Grenz- und Konfliktregionen
- Auflösung der Oberfläche als Grenze

Wissenstransfer

- Peter Eisenman über Post-Indexical Criticality
- Internationaler Ideenaustausch / European Architecture Students Assembly
- Akademische Mobilität / Austauschprogramm des D-ARCH der ETH Zürich
- Digitaler Datentransfer / Digitale Architekturproduktion

Architekturzeitschrift mit Beiträgen
von Studierenden, Assistierenden,
Professoren und Gastautoren

by Hosoya Schaefer Architects



FRONTSCREEN: LCD Wall Display Screen

DASHBOARD: Three touch screens



TS1: Theme selection

TS2: Topic navigation

TS3: Text and data info



Mobiglobe is a research project and media installation for Autostadt in Wolfsburg, the theme park, and communications platform of the Volkswagen Group. The installation, created by Hosoya Schaefer Architects in Zürich in collaboration with Shiftcontrol, Copenhagen, and Buro Destruct Berne, shows topics of auto-mobility in a wide range of areas from 'highway city' to 'oil world.' With interactive, three-dimensional data graphics driven by a game engine, the installation aims to convey the contemporary dilemma between increasing comfort, freedom and safety in the individual experience of a car on the one hand, and the increasingly problematic urban and global effects on the other, especially when faced with new demands in emerging countries.



NA OF AUTOMOBILITY

MOBILE CULTURE
BY HOSOYA SCHAEFER

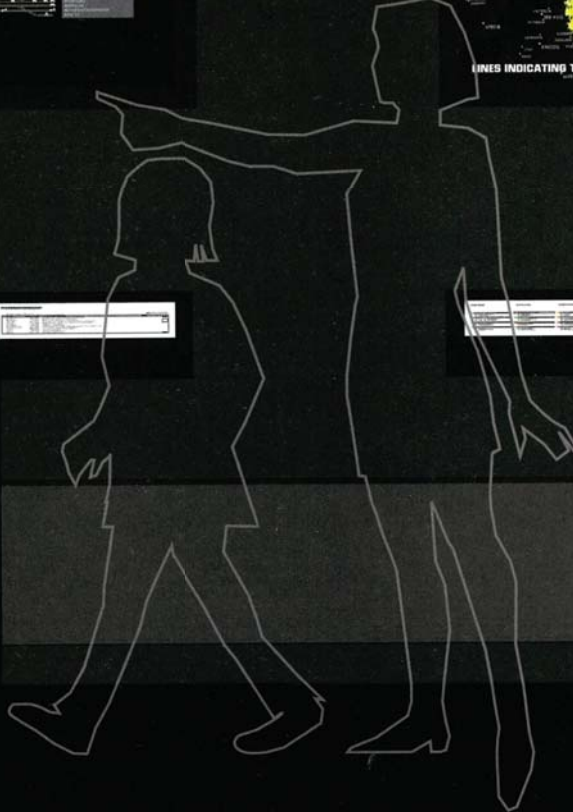
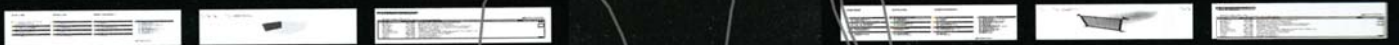


EVOLUTION OF CAR TYPOLOGIES

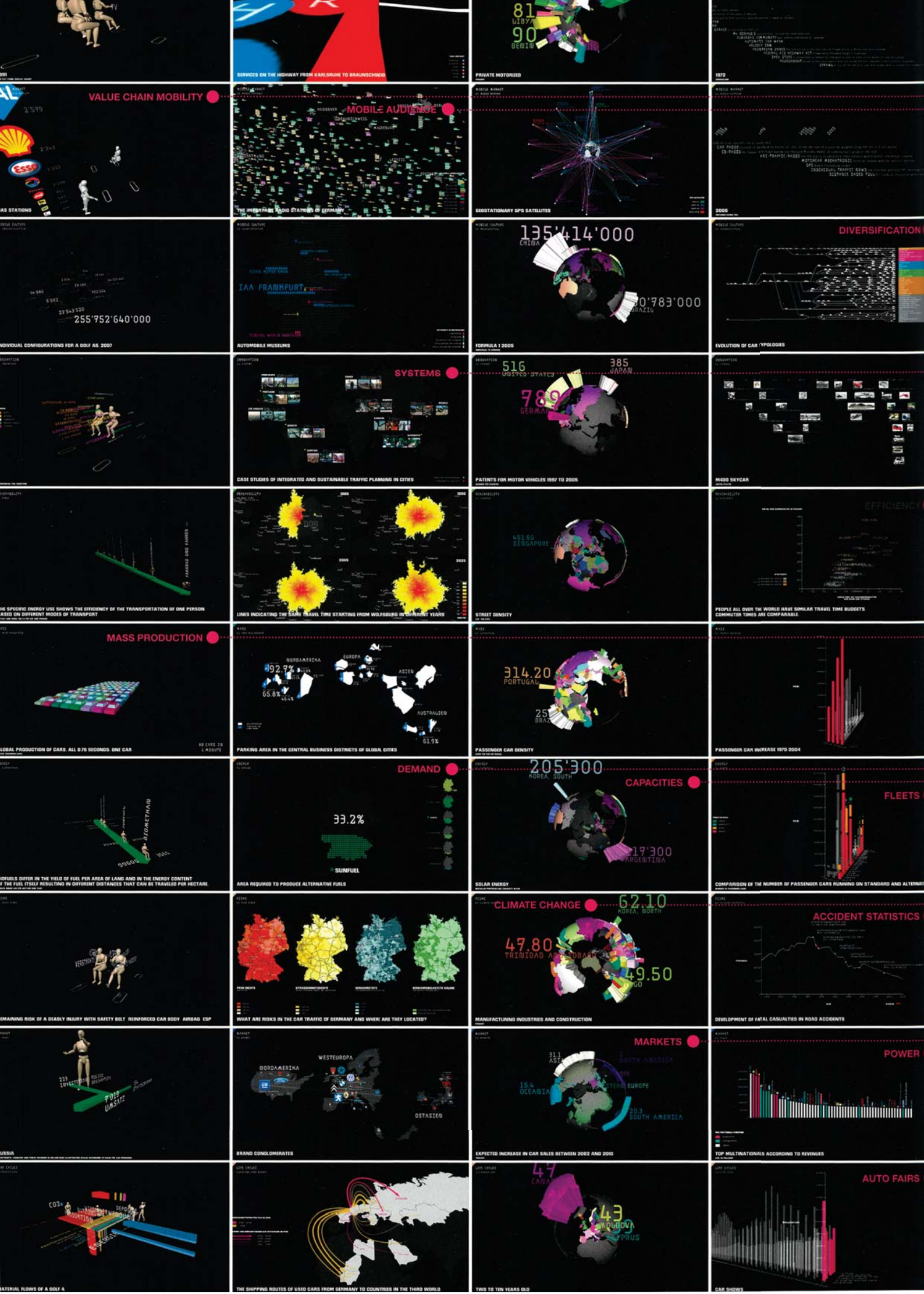
REACHABILITY
BY HOSOYA SCHAEFER



INES INDICATING THE SAME TRAVEL TIME STARTING FROM WOLFSBURG IN DIFFERENT YEARS



Location: Wolfsburg, Germany
Client: Autostadt, Wolfsburg
Concept, research, art direction, and production: **Hosoya Schaefer Architects, Zürich**: Markus Schaefer, Hiroshi Hosoya, Isabelle Bentz and Yann Gramagna, Tim Rieniets, Thomas Kägi, Hyuck Jin Yoon, Jeanette Beck, Sandra Sands, Magnus Gabrielsen
3D application development and application integration: **Shiftcontrol, Copenhagen**: Jorgen Skogmo, Patrik Svensson, and Henrik Malmgren
Graphic consulting, style guide, typography: **Buro Destruct, Bern**: Lopetz and Heiwid
Installation design: Ralph Applebaum Associates, New York
Sound: Nik Schäfer, Zürich
Completion: November, 2006



FROM INDIVIDUAL EXPERIENCE TO GLOBAL EFFECTS

MOBILE MARKET

The topics are organized in three large chapters (culture, economy and system) and twelve themes ranging from mobile space to fuel. Each theme again is examined in the scale of the car, the region, the world and time. Throughout the themes, the project intends to show the link between individual experience and global effects.

MOBILE CULTURE

Since its invention the car has always been about more than just movement. The automobile and auto-mobility have brought about a whole range of phenomena that, to a large extent, define our society.

INNOVATION

Mobility not only makes space accessible, it also creates its own spaces. The increase in everyday mobility has transformed the automobile and its infrastructure into parallel universes at the scale of the car, the streetscape or the **highway city**. Like a marketplace, the car is at the intersection of diverse **value chains** and **information flows**.

REACHABILITY

Yet the car's technological basis has hardly changed since its inception. The car evolved from an industrial **mass product** to an increasingly differentiated product for ever more finely grained consumer **segments and lifestyles**. However, the one product in human history that has most profoundly affected our personal reach and urban environment has at the same time never undergone a radical reinvention.

Enabled by industrialization and mass consumption, the car plays a central role in our culture. It is a product for **conspicuous consumption** and for many represents the very progress in culture and technology.

MASS

In **many places** in the world, life without a car is not thinkable or worse, as in the large suburban developments in the industrialized nations, not possible.

While cars are getting more **secure**, comfortable and attractive for individuals, on a global level auto-mobility reaches its limits. Global risks, like **climate change** and **peak oil**, are becoming apparent.

ENERGY

While **resources** and spaces are becoming scarce, there are nine multinational car companies and nine oil corporations among the **sixty largest companies**, by turnover, in the world.

Even though large **oil reserves** remain, demand shows no sign of slowing its exponential growth. And although shrinking reserves make the search for **alternative fuels** increasingly urgent, the oil dependency only grows more acute. Conflicts are certain to arise once decreasing reserves meet increasing demands.

RISKS

Alternative fuels do not yet provide the efficiencies to be an effective replacement for fossil fuels nor are they **widely used**.

MARKET

In order for individual mobility to retain the role it has today, mobility needs to be reinvented fundamentally. New **efficiencies**, multi-modal transport systems, energy sources, behaviors and cultural values need to be developed, especially when faced with the huge potential demands in **emergent economic powers** like China and India.

For cities to function, access to resources, jobs, ideas or people is essential. It is critical to envision a future where access is provided by spatial and programmatic density more than by ever increasing levels of individual mobility.

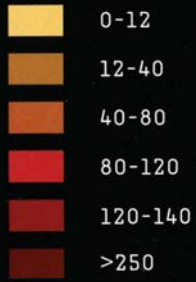
12. OIL
12.1 OIL CITY

NORWAY

GREAT BRITAIN

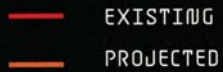
BARRELS (in Billions)

1 US BARREL = 158.9 Liters



OECD
ORGANISATION FOR ECONOMIC
CO-OPERATION AND DEVELOPMENT

PIPELINES



GAS STATIONS
NUMBER PER COUNTRY



OIL FIELDS



OIL FLOW



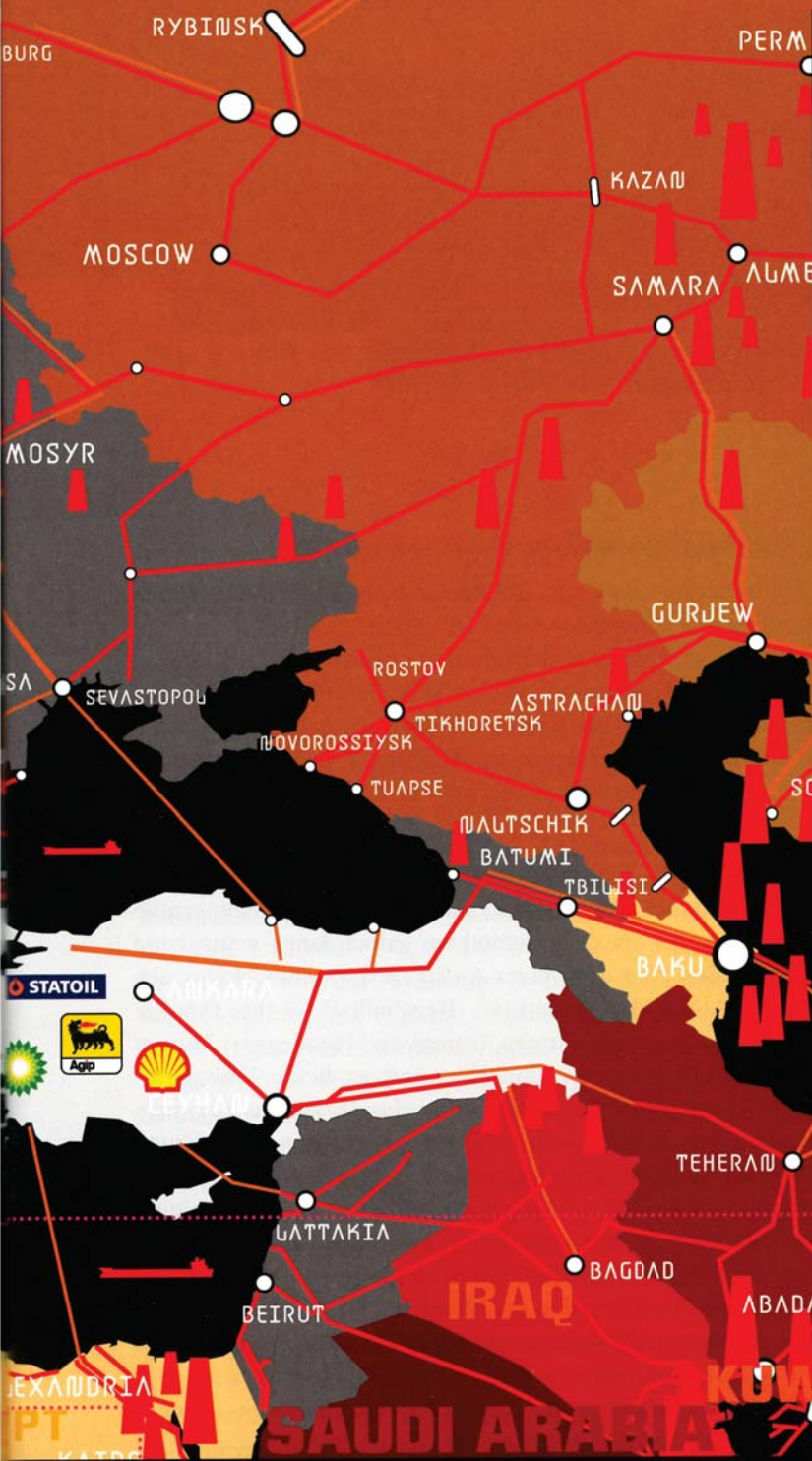
OIL CITY



Cars are dependent on oil not only for fuel, but as an essential ingredient in synthetic products, like tires or gaskets, plastics or lubricants.

The vast infrastructure of oil and gas pipelines now serving the EU has taken on almost urban proportions. The EU aims to keep the energy supply stable with additional investments in infrastructure, international agreements, and

RUSSIAN FEDERATION



While there are different estimates when we will run out of oil, according to Dr. Colin Campbell, a former oil consultant turned peak oil activist, the peak of oil production might be crossed as early as this year. Despite the fact that there are at that moment still large oil reserves available, the cost and the conflict of distribution will increase when dwindling supply faces rising demand. The EU is attempting to secure its almost urban infrastructure of oil- and gas-pipelines. The "Inogate" program, short for Interstate Oil and Gas Transport to Europe, aims to ensure regional stability, cooperation, and investment to secure the oil supply. Shown on the consumer side is the amount of petrol stations per oil-corporation and country.

The Baku-Tbilisi-Ceyhan (BTC) pipeline from Azerbaijan to the Mediterranean Sea connects for the first time Baku, where the very first oil drilling derricks were built, directly with Europe navigating around politically unstable Armenia.

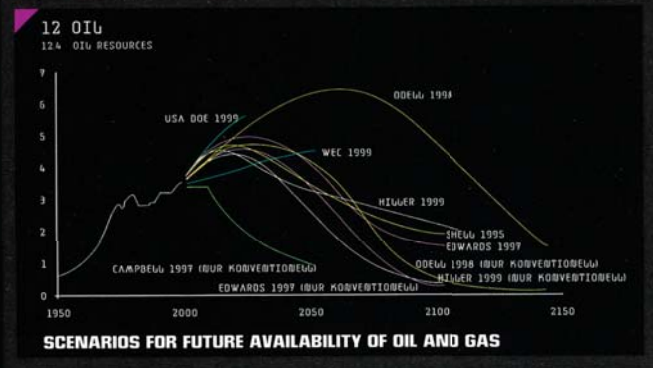
Markus Schaefer, Isabelle Bentz

OIL WORLD



An overview over fossil fuel reserves, production, and consumption worldwide shows their uneven distribution. It also gives an idea about their flows and choke points.

OIL RESOURCES



Opinions differ as to when we will run out of oil. Shown here are reserves when extracting oil with conventional methods, respectively methods that are not commonly used yet. Even though large reserves remain, demand shows no sign of slowing its exponential growth. Conflicts are certain to arise once decreasing reserves intersect with increasing demands.