



UNIDO Pharos Suite The Past and The Future

20 years of collaboration in digital
transformation innovation for efficient
and sustainable inclusive industrial
development

Presentation by Serguei Golovanov
at 4-th Conference "Green Industry for Sustainable
Cities 2016", UNIDO - Ulsan Metropolitan Area,
28-30 June 2016, Ulsan, Korea

Project history and background

- 1990: GOLEM IMS GMBH established
- 1991-1992: CLAIR software tools for environmental risk assessment, IAEA study
- 1994-1997 BEST, FIT, Pharos, MCCT enterprise software packages by UNIDO
- 1998: UNIDO Service Contract for development, distribution and support of Business Performance Software Pharos, BEST, FIT, MCCT
- 2000: Contract UNIDO-GOLEM upgrade for Pharos suite implementation.


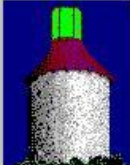

info link: <http://www.unido.org/en/pharos.html>




~2005



PHAROS - Business Navigator. V4.00 Copyright for UNIDO 1994 - 2005.

DataBase Year 2005 Reports Options Targets Help Exit

Costs	Performance	Quality
 Summary Budget: Entered Results for: 8 months	 Summary Cash Flow 0.14 Profit Margin 0.17 Performance for: 8 months	 Summary PQX: 100.00 CSX: 99.17 Quality data for: 8 months
Costs HIGH target 113 % Costs LOW target 99 %	Cash Flow target 0.076 Profit Margin target 0.100	PQX target 91.20 % CSX target 99.30 %
Graph Results Budget	Graph Performance data	Graph Quality data

Competitiveness	Product Contribution	Customer Sales
 Summary Value 0.52 AV-trend -0.03 Competitiveness for: 8 months	 Summary Average Contribution per product 907375 Contribution for: 8 months	 Summary Average customers revenue :2989426.8 Contribution for: 8 months
Competitiveness target 0.54 Acceptable variations 0.37	Added Value target 28600000 Acceptable variations 18018000	Customer Sales target 50320000 Acceptable variations 27676000
Graph Competitiveness	Graph Contribution data	Graph Customers data



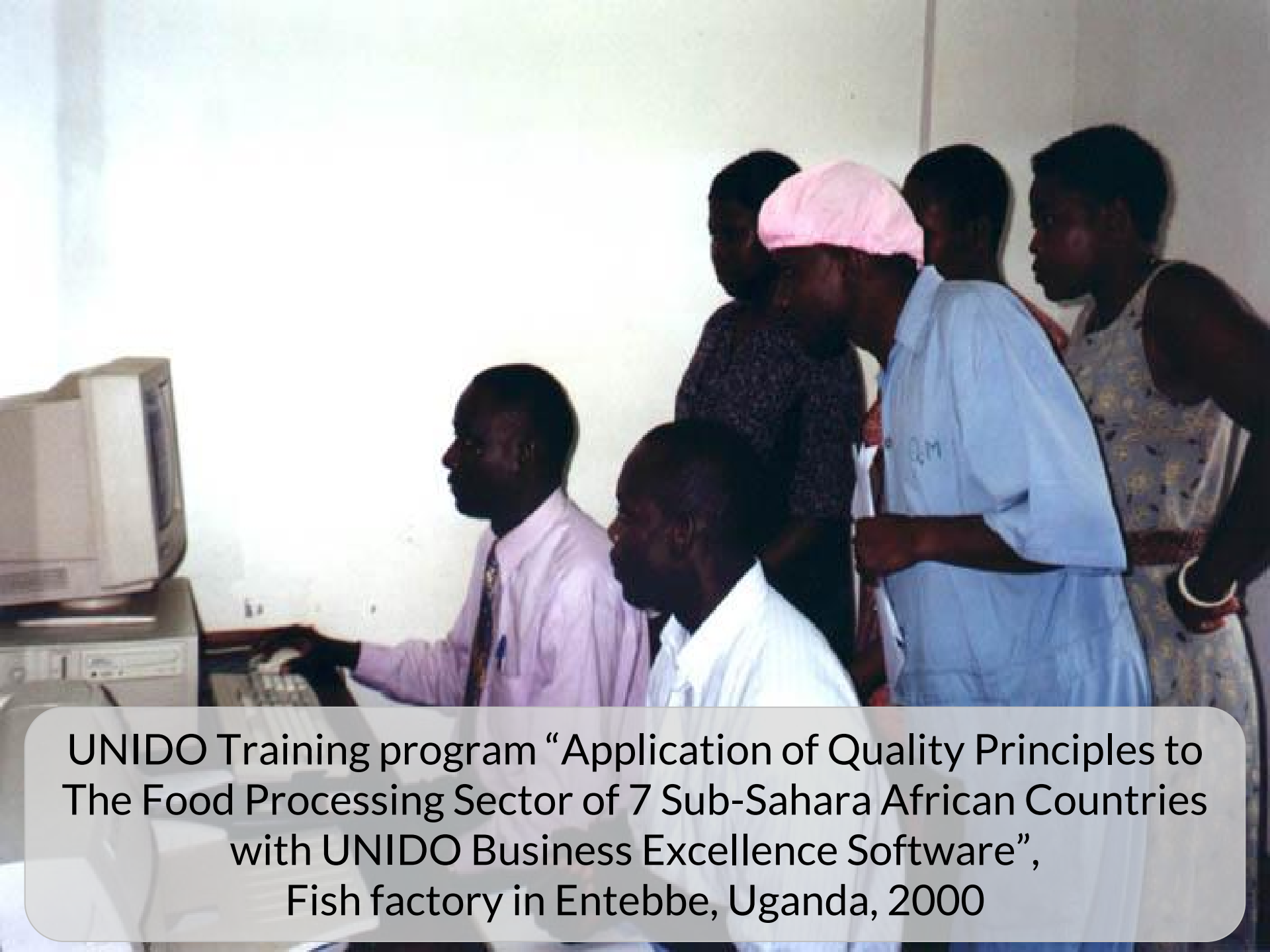
UNIDO Pharos suite had been implemented in many industrial modernizations and capacity building projects in several countries including Bahrain, Colombia, Cuba, Egypt, India, Indonesia, Kenya, Lebanon, Slovakia, Saudi Arabia, Pakistan, Palestine, Russia, Serbia, Tanzania, Turkey, Ukraine, Uganda, UK, Zambia, etc

Implementations

- 30 countries
- 12 Industrial sectors
- > 3000 installations in Small and Medium Enterprises in 4 continents
- Engagement with UNDP, Industrial Associations, Training and Consulting institutions, Productivity and Entrepreneurship centers in EU, Middle East, Latin America, Asia, Africa



“We really appreciate PHAROS - as a concept and as a Business Performance tool presenting of its output Indicators”, S. Sardesai, General Manager, Mumbai, India 2000.
UNIDO-ACME programme for SME Automobile components suppliers



**UNIDO Training program “Application of Quality Principles to The Food Processing Sector of 7 Sub-Sahara African Countries with UNIDO Business Excellence Software”,
Fish factory in Entebbe, Uganda, 2000**



UNIDO Integrated Programme in Colombia 2002-2004:
Improving quality, competitiveness and performance of Colombian Industries



SECCION
MONTAJE

ldi
MECANICHE

Enterprise installations and business performance applications in leather industries, Bogota, Colombia 2003



Workshops, factory installations and coaching in Industrial Modernization Programmes, Lebanon 2004 and 2007, 2008 by UNIDO, Association of Lebanese Industrialists and ELCIM



Paper manufacturing enterprise, Tripoli, Lebanon, 2008



UNIDO Pharos business performance and productivity training workshop for senior management and governmental administration, Jakarta, Indonesia 2006



Industrial modernization project in Cuba: 2008 -2010
upgrading enterprises and municipalities



Annual Pharos Training Workshops at UNIDO, Vienna 2001-2009.

Implementations: International programs and events

- Annual UNIDO Pharos Training Workshops "Management of Industrial Change by measuring, benchmarking and managing of business results", UNIDO, Vienna 2001-2009.
- Training Workshop "Assisting enterprises in preparing to investment and modernization programmes by benchmarking and managing of business performance with Pharos Software Suite", UNIDO in collaboration with Republican Administration of Voronezh Province, Voronezh, November, 2008.
- Workshop on preparation of the programme for the industrial modernisation and investment upgrading of the SME suppliers for Petróleos de Venezuela, S.A. (PDVSA - Venezuelan state-owned petroleum company), Caracas, Venezuela, 22-28 September 2008.
- Implementation of the SME's modernization programme "Management of Change" by Euro-Lebanese Center for Industrial Modernization, Beirut, Lebanon, 2007-2008, EUROPEAID Project for Lebanon.
- UNIDO Training Workshop "Management of Industrial Change by benchmarking and managing of business results with UNIDO Pharos Software Package", MINVEC-DISAIC-UNIDO, Havana, Cuba 2008.
- UNIDO Training Workshop "Assisting enterprises in preparing to investment and modernization programmes", UNIDO in collaboration with Ministries of Industrial Development and Trade and Entrepreneurship, Ufa, Bashkortostan, Russia, July 2007.
- UNIDO Pharos Training Workshop "Measuring, benchmarking and managing industrial enterprise with UNIDO Pharos Software Suite", ICS-UNIDO, Ministry of Research and Technology (MoRT), Centre for Management of Innovation and Technology (MIT), Jakarta, Indonesia 31 July - 4 August 2006.
- Presentation "Upgrading programmes improving SME capacity to cope with globalization and other challenges by using UNIDO information technology tools, methodology and best practices: sharing the experiences and results" at 3-rd India Global Summit on SMEs organized by Confederation of Indian Industry (CII), Ministry of Small Scale Industries (SSI), Government of India, Delhi, November 2005.
- Presentation "Improving productivity, quality, competitiveness and sustainability of SME's by applying UNIDO IT solutions for business performance measurement, management and benchmarking" at World Association of Small and Medium-sized Enterprises Convention WASME 2005, Bucharest, Romania, May 2005.
- Meeting & presentations "Applying UNIDO IT solutions for business performance measurement, management and benchmarking to capacity building and upgrading of entrepreneurs" during official state of Dr. Schuessel, PM of Austria visit to China, April 2005 (Peking, Shanghai, Nanjing).
- Presentation "Improving business results by applying UNIDO IT solutions for business performance measurement, management and benchmarking" for Industrial Committee Meeting of the Chamber of Commerce & Industry of Eastern Province, Dammam, Saudi Arabia, April 2005.
- Meetings and presentations "Applying UNIDO IT solutions for business performance measurement, management and benchmarking to capacity building and upgrading of entrepreneurs" during state visit of Dr. Fisher, President of Austria to India, Feb.2005 (Delhi, Hyderabad, Bangalore, Mumbai).
- Small & Medium Enterprises International Conference & Exhibition, Dubai, UAE by INSME and Department of Economic Development - Government of Dubai, Emirates Bank, UAE, 31.1-2.02.2005.
- Presentation at the Business Symposium "SMEs Competing in a Knowledge Economy", 2 OECD Ministerial Conference, Istanbul, Turkey June 2004.
- UNIDO Programme for Palestine "Improving Business Performance by Continuous Improvement Practices Based on UNIDO Business Performance Management Software", August - November 2004.
- UNIDO Upgrading programme "Measurement for continuous improvements in quality, efficiency, productivity, competitiveness" by UNIDO, Association of Lebanese Industrialists (ALI), Euro-Lebanese Center for Industrial Modernization (ELCIM), Lebanon, June - October 2004.
- The UNIDO/IMC workshops "Application of UNIDO benchmarking and business excellence tools for enterprise upgrading, strategic and production management, IMC/UNIDO workshops, Cairo/Alexandria/Borg El Arab, Egypt, February - April 2004.
- 2nd INSME Association Committee Meeting, 25th of February in Malmö, Sweden.
- "INSME THINK TANK", International Network for Small and Medium Enterprises, Rome, Italy 2003.
- Presentation of UNIDO Business Performance Management Products and its applications in upgrading programmes, UNIDO Conference "Improving Efficiency of Company's Business through Implementation of TQM/EMS", Moscow, Russia, 2003.
- The results and experiences of bringing continuous improvement know-how and UNIDO business performance information technology tools to industrial entrepreneurs, presentation at the Forum by UNECE, UNDESA, ILO, UNAIDS, UNICEF, UNDP "Youth of the XXI Century: Realities and Perspectives", 24-26 September 2003, Kyev, Ukraine
- The UNIDO workshop "Strategic and production management of industrial enterprise: application of UNIDO benchmarking and business excellence tools Pharos + Produce-Plus", UNIDO ITPO/ARCEIT, 2003 Manama, Bahrain
- UNIDO Integrated Programme for Colombia, Component II, Improving Quality & Productivity in Leather, Electronics, Metal Processing, Textile sectors by continuous improvement, workshops and implementations in Bogota, Barrancabermeja, Ibague and Pereira, Colombia, 2002 - 2003.
- Presentation "UNIDO Business Performance management tools for entrepreneurs" at E4PQ: Regional Forum on e-Productivity and Quality by UNIDO, 21-23 Nov. 2001, Warsaw, Poland,
- UNIDO Industrial Upgrading Programme, Pharos Training Workshop, UNIDO, Ministry of Industries and Palestine Federation of Industries, Ramallah, Palestine, July - Oct. 2001
- UNIDO Workshop and upgrade programme "Application of Quality Principles to The Leather Production Sector in Egypt", April 2001, Cairo, Egypt
- UNIDO Training workshop for national consultants "Application of Quality Principles to The Food Processing Sector of 7 Sub-Sahara African Countries with UNIDO Business Excellence Software", July 2000 and on-site installations in Kenya, Uganda, Tanzania, Zambia, Ethiopia, and Zimbabwe.
- UNIDO Upgrading Programme "Strengthening of Small and Medium automotive component suppliers to deliver export quality products", 1999, Delhi, Pune, Bangalore, Mumbai, Baroda, Nashik, Ahmednagar, India.
- UNIDO Training Workshop "Facilitating Sustainable Industrial Development and Competitiveness by Applying UNIDO Pharos IT tools for entrepreneurs", Oct. 1999 Siktivkar, Republic of Komi, Russia

Implementation examples

Bahrain UNIDO ITPO/ARCEIT office, Manama	Industrias de Cables y Partes, Pereira Magom Electronica, Pereira Normarh Ltda, Pereira Integrando Ltda., Pereira Dosquebradas Chile Universidad de La Frontera, Temuco Metalúrgica Hund Cuba: 20 state owned enterprises Egypt Cairo Int'l for Leather Industries Short Shoe Factory Baramki Group Cairo Industry For Leather and Chemicals Arto M Co. Ramadan Chehata Sons Factories Condor Footwear Leather Technology Center FLISC, UNIDO Ministry of Industry and Technology TCAE 2 M Shoes Company ASI-Egypt Wonder Foods products Glacier Products Ltd.Kuwait Arab Planning Institute, Shuwaikh India Vir Rubber Products, Mumbai Standard Radiators metal-radiators producer), Baroda Zylog Plastalloys Ltd, Nasik Manikprem Industries, Ahmednagar, Engineering Plastics, Pune ACMA Technical Centre, Delhi Federation of Indian Chambers of Commerce & Industry (FICCI) Power & Energy Development Centre, Bangalore UTISTA Management Consulting, Bangalore	Lebanon Joseph B. Amatoury s.a.r.l Oriental Paper Products Kfarshima General Packaging Industries Cortas Canning & Refrigeration Company s.a.l. TANMIA Henry Abdallah P.F.M. sal" (REVA MATTRESSES) Converting Hygienic Tissue Paper PERLA Ets. Michel Noujaim SAL WILCO PM sarl.", Chekka Palestine UNIDO Integrated Programme for Palestine Birzeit Pharmaceutical Company NBC-Cocacola ASI- Egypt Pharmacare PLC Sinokrot Food Co Al Haya Food Co. Jerusalem Pharmaceuticals Nassar Invest. Co Ministry of National Economy Gama Pharmaceutical Flefel Co. Russia Center for Executive Education, Siktivkar State University Serbia VING Doo, Novi Sad. Training programme for entrepreneurs by Government of Vojvodina (Serbian Province) Saudi Arabia Plastic Production Components Slovakia Industrial Management Consulting Slovakia s.r.o., Bratislava Melli Interiery, s.r.o., Bratislava Sri Lanka	University of Kelaniya, Kelaniya Sudan Solutions Company Ltd., Khartoum Thailand Thai Pharos Software Company Ltd., Asian Institute of Technology, Turkey USEGO Consulting, Istanbul Zambia Eureka Chickens Ltd. (Zambia) Meatland Ltd, Lusaka (Zambia) Uganda Hwan Sung Ltd., Ngege Ltd Uganda Fish Packers Greenfields Limited United Kingdom Centre of Vocational Excellence, The Humber Institute of Food and Fisheries, Grimsby, Manufacturing Improvement International Ltd., Grimsby, N E Lincolnshire Hull University MSc Food Standards Science Disposables UK, Ltd. Vickers Laboratories Ltd, Graftons Bakery Ltd. Yorkshire Farm Bakery Ltd Riverside Food Services Ltd. Wensleydale Creamery Ltd. Smales Fish Merchants Ltd. Regal Fish Ltd Kwoks Ltd. Healthfresh Ltd. Bleikers Smokehouse Ltd. Food Design Ltd. Shepherds Purse Ltd. University of Wales Institute, Cardiff Venezuela PDVSA - state-owned petroleum company
---	---	--	--



Pharos platform 2016

New generation of advanced ICT enabling digital transformation and innovative models of Smart Management and Governance for sustainable inclusive development in green metropolitan areas, circular economy and industries

Smart City Monitor:

Smart Governance, Circular economy,
Sustainable industries, ISO 37120, etc

Smart Enterprise Monitor:

Connected Manufacturing, Services,
Green technologies, Eco-innovation
Preemptive, Predictive maintenance
and Condition monitoring

Smart Education:

Learning to manage systems complexity

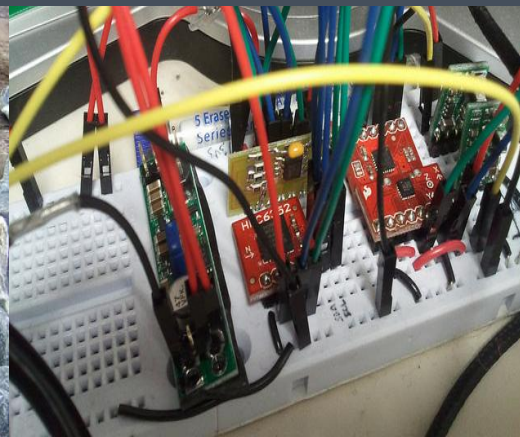
PHAROS Suite solution helps to address Metropolitan & Industrial challenges

- Accelerating Change in technologies, demand, supply, value-chains, knowledge, quality, standards, requirements, environment, climate, markets, finance, etc
- Growing Complexity of Everything
- Smart Everything everywhere
- Smart Systems interlinkages add to Complexity
- Uncertainty, Volatility, Ambiguity
- Impact of all these combined on Sustainability



Easily linking of large number of diverse data sources to a custom model of the city or enterprise (standard protocols REST, CoaP, MQTT, etc).

IoT
Sensors
Cameras
SCADA
ERP
MES
Mobiles
Databases
Autonomous smart systems





Economy
Education
Energy
Environment
Finance

Fire and
Emergency
Response

Governance
Health
Recreation
Safety
Shelter
Solid Waste

Telecommunica
tions and
Innovation

Urban Planning
Transportation
Wastewater
Water and
Sanitation

(by ISO 37120)

Revealing multiple diverse urban processes in integrated holistic vision of sustainability in metropolitan area or enterprise apps in real time.



Using custom models of complex cyber - physical systems, the Pharos Navigator transforms the big data streams into

Simple, easy understandable information presented in common human terms and images for the stakeholders of different age, level of education and interest groups.



WHAT IS THE CURRENT STATUS OF OUR CITY?
OR ITS SUBSYSTEMS -THEMES in ENERGY, WATER WASTE TRANSPORT?
etc

EXCELLENT!
OPTIMAL.
DEFICIENT?



Global Sustainability Monitor

International project proposal

Development of comprehensive Global Sustainability Model presenting accelerating change, benchmarks & trends in real time

- Enabling transparency for public trust, risk assessment and comprehensive set of key performance indicators
- Global financial system functioning, sustainable financial system targets, carbon pricing
- Climate-related risks to lenders, insurers and investors
- Implementation of COP21, SDG, other commitments by cities, regions and states presented on maps, stats
- Social change, business and human rights
- Nexus of climate change and inequality, energy and inequality, health and the environment
- Impacts of the refugee crisis, humanitarian challenges, human rights policies
- Mitigating and adapting to climate change

- Environmental, ecological impacts, biodiversity
- Current status in focus areas: social, economic, environmental, life, health, and others
- It's diverse indicator values for local, regional and global communities in real time (2D&3D)
- Transparency of results, analytics, trends
- Simulation of change scenarios, policies and optional impacts, Benchmarking
- Collaborative international efforts to advance and enhance the Global Sustainability Model
- Educational tools for schools and universities
- Integration with Augmented & Virtual reality, Gamification and mobile apps

Additional info, sample application models
and subscription services:

<http://pharosnavigator.com>

Internet search keywords:

UNIDO Pharos

You can find us at
@MonitorSmart

Contact us for novel applications and innovative
projects! info@golem.at

Credits:

Intel Free Press Follow, Energy Sensors <https://www.flickr.com/photos/intelfreepress/7791648928/>, the image was cropped

Intel Free Press Follow, Air Quality Sensor Provides Big Data for Visualization <https://www.flickr.com/photos/intelfreepress/8758728522/> the image was cropped

Kecko, Rail Sensor <https://www.flickr.com/photos/kecko/532999479/> the image was cropped

Michael Janssen, Wires and Sensors <https://www.flickr.com/photos/jamura/5344576194/> the image was cropped

KIT TECO, bPart industrial IoT device <https://www.flickr.com/photos/138891539@N03/23908928999/> the image was cropped

Seattle Municipal Archives, Worker in bottle factory, 2000, <https://www.flickr.com/photos/seattlemunicipalarchives/2710933334/> the image was cropped

Bill McChesney, 27691 Community Open House at the New Martha Jefferson Hospital <https://www.flickr.com/photos/bsabarnowl/6019647611/> the image was cropped

Vinoth Chandar, oh dear.. save water! <https://www.flickr.com/photos/vinothchandar/4415664247/> the image was cropped

Marika Bortolami, Villach - Austria, 2014 https://www.flickr.com/photos/marika_bortolami/13883311197/ the image was cropped

x1klima, Universität Wien Student Point <https://www.flickr.com/photos/x1klima/8536551477/> the image was cropped

<http://www.bigstockphoto.com/>

Cybersecurity101, Wikimedia Commons, Smart City Graph, https://commons.wikimedia.org/wiki/File:Smart_City_Graph.jpg