

DPWN and Innovation

Informatik 2007

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Bremen, 26. September 2007

Agenda

Innovation – What it is about

Trends driving change – Why innovation matters for DPWN

How to strengthen the innovation of DPWN

Some actual research examples

The DHL Innovation Center. what it is and how to use it

Innovation – Some “Definitions”

Innovation is a
successful creative
destruction...

(Schumpeter, 1911)

Often... the words „creativity“
and innovation are used
interchangeably. They shouldn't
because while „creativity“ is
coming up with ideas, it's the
bringing ideas into life... that
makes innovation the distinct
undertaking it is.

(Davila, 2006)

Innovation is a new element in
the network which changes the
costs of transaction between at
least two elements or modes in
the network...

(Regis Cabrall, 1998)

Innovation is a specific
management process that
requires specific tools, rules
and... discipline...

(Davila, 2006)

Key factors for successful innovation

- “It is through the free flow of ideas across work groups, departments and divisions that innovation flourishes.”

Quote: Frederick W. Smith, Chairman and CEO of FedEx

- “Sometimes when you innovate, you make mistakes. It is best to admit them quickly, and get on with improving your other innovations.”

Quote: Steve Jobs, co-founder and CEO of Apple Computer

- „Be quick. The world is changing very fast. Big will not beat small anymore. It will be the fast beating the slow. “

Quote: Rupert Murdoch – American Media Mogul

- “Innovation, not instant perfection: Launch early, learn from mistakes, listen to users, iterate, learn enough to quickly improve on the way.”

Quote: Marissa Mayer, VP GOOGLE Search Products & User Experience

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Further Trends (not exhaustive)

Field

Sociography

Megacities

Rising age of population
in mature countries e.g.
Europe

More DINK &
single households
in mature countries

Politics /
environmental

Global
warming

Terrorism
goes global

Business
models

New kind of
cooperation /
collaboration

New low cost
service models
e.g. airlines,
bakery, ...

Fractalization
of value chains
by means of IT

How those Trends are creating innovation in our industry (Examples)

Trends	Impact
Low cost business model and collaboration	Hermes attacks BtC parcel business of DPWN in Germany
E-business & DINKs & fractalization of value chain	Kiala ((semi-)automated drop points) Packstation (DPWN) Drop Point Strategy Express Europe
Rising age of population	Postbank special program for elderly people and online banking
Terrorism ⇒ new customs legacy	Secure container (work in progress, DPWN)
E-business & E-business collaboration	Digital stamp EBPP
Global warming	Co ₂ -trading (Kyoto) Green parcel (DPWN)

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Innovation – What it is about

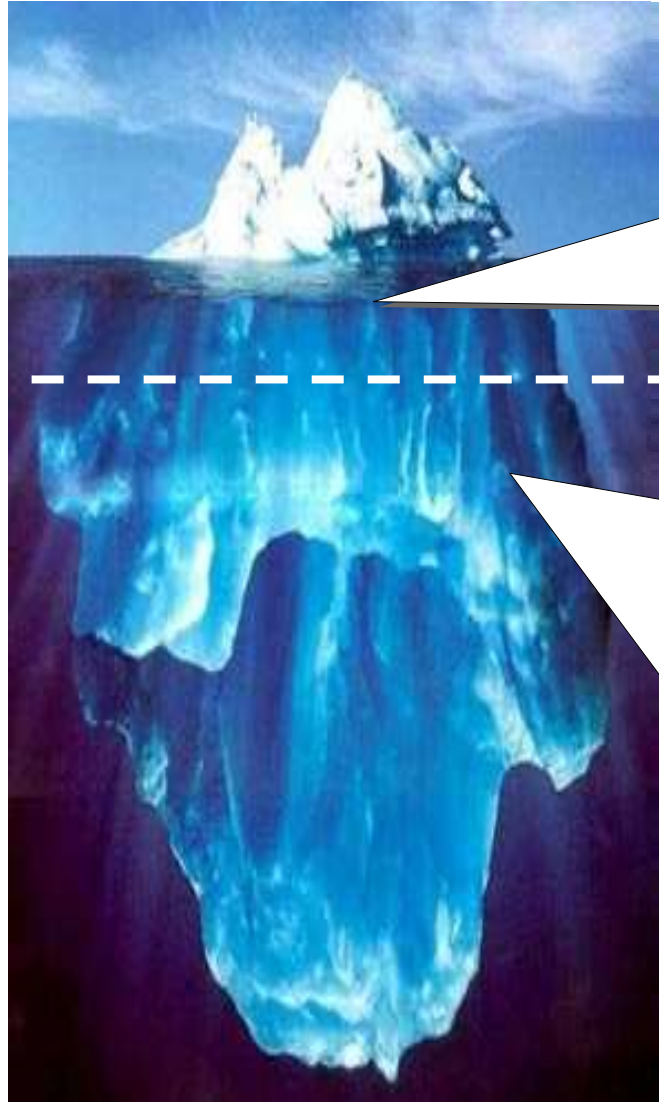
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Initial Situation at DPWN



External view: only mixed external image of DPWN

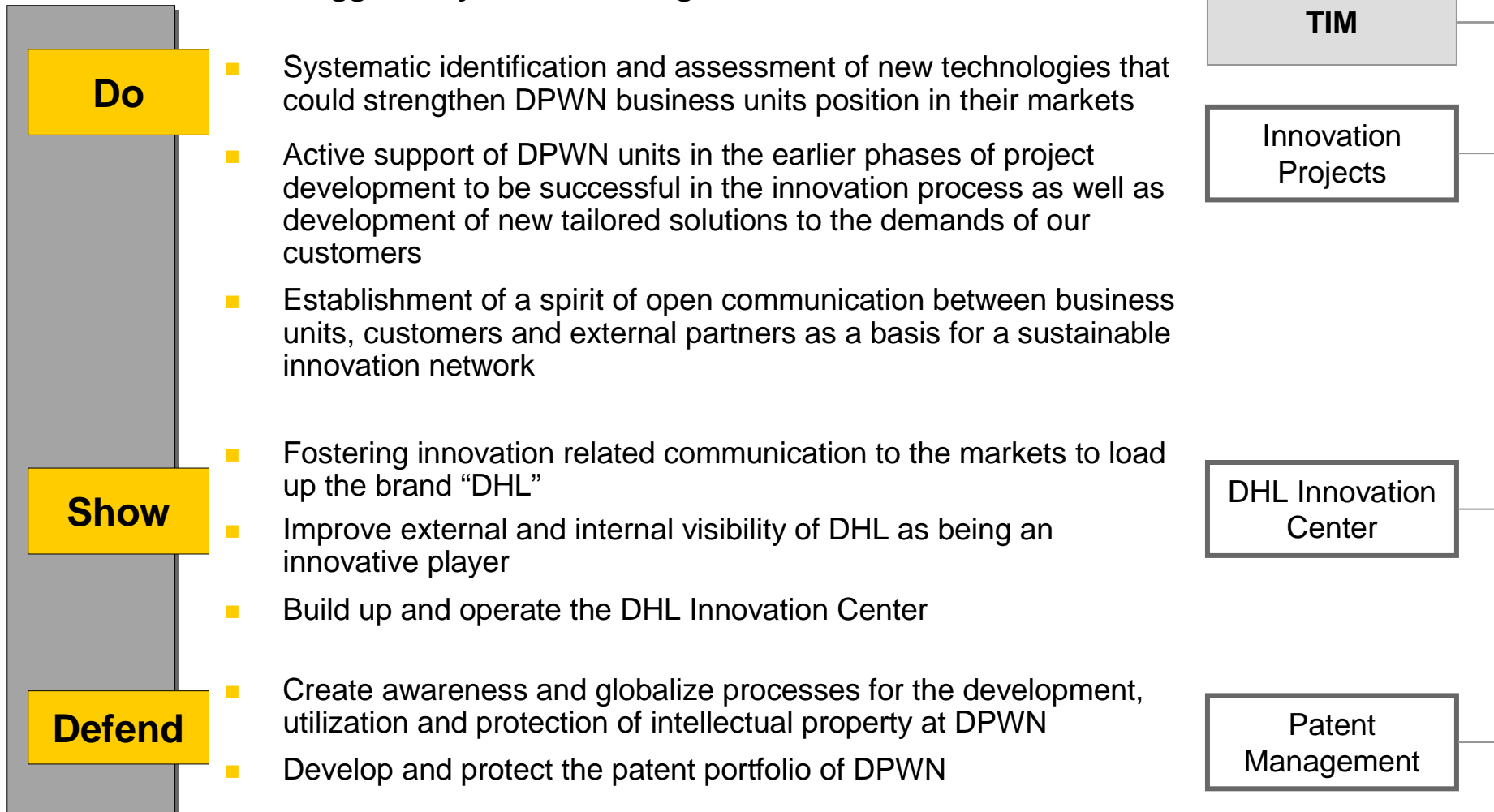
- Postbank has a positive innovation image
- Image of DHL and Exel is inconsistent
- Deutsche Post is seen as conservative but reliable

Barriers against innovation are strong

- No homogenous approach of how to handle strategic innovations within and across the different business units
- Innovation mainly bottom up, decentrally and not systematically, driven by „hidden champions“
- Usually no dedicated organizations for innovation but covered by different units (e.g Marketing/Sales, Strategy, Operations, IT)
- Short term focus of BUs (predetermined by bonus targets)
- Restricted human resources and budget at BU level
- Risk aversion and wrong reward structure
- Major part of value creation through innovation outsourced – only limited competency inhouse (no „educated customer“ role)

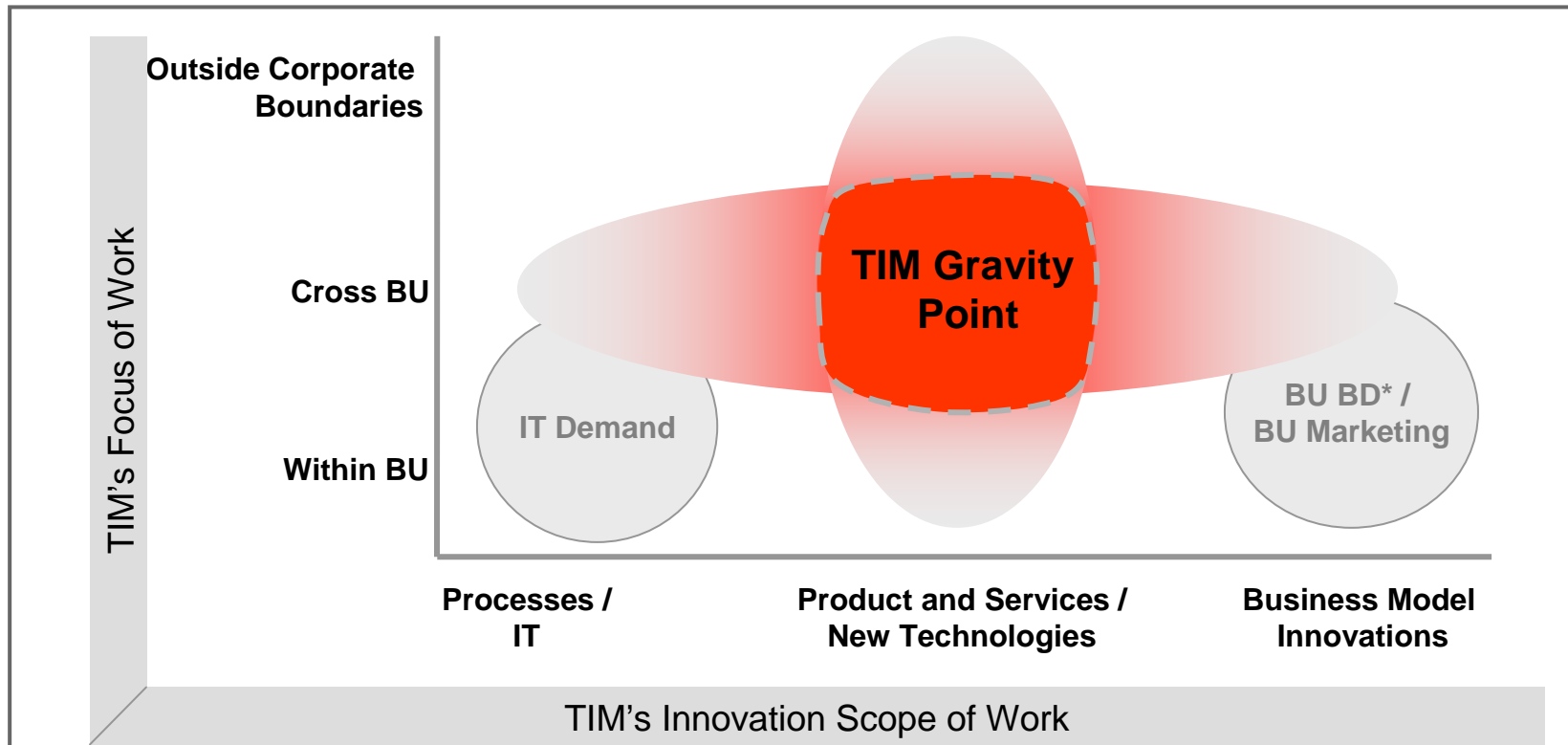
Mission “Technology and Innovation Management / TIM”

Foster the innovation power of DPWN’s business units by lowering the barriers and strengthening the demand side - with focus on new products and service innovations triggered by new technologies:



TIM predominantly is concerned with technology driven product / service oriented innovation

Gravity of Innovation for DPWN / TIM



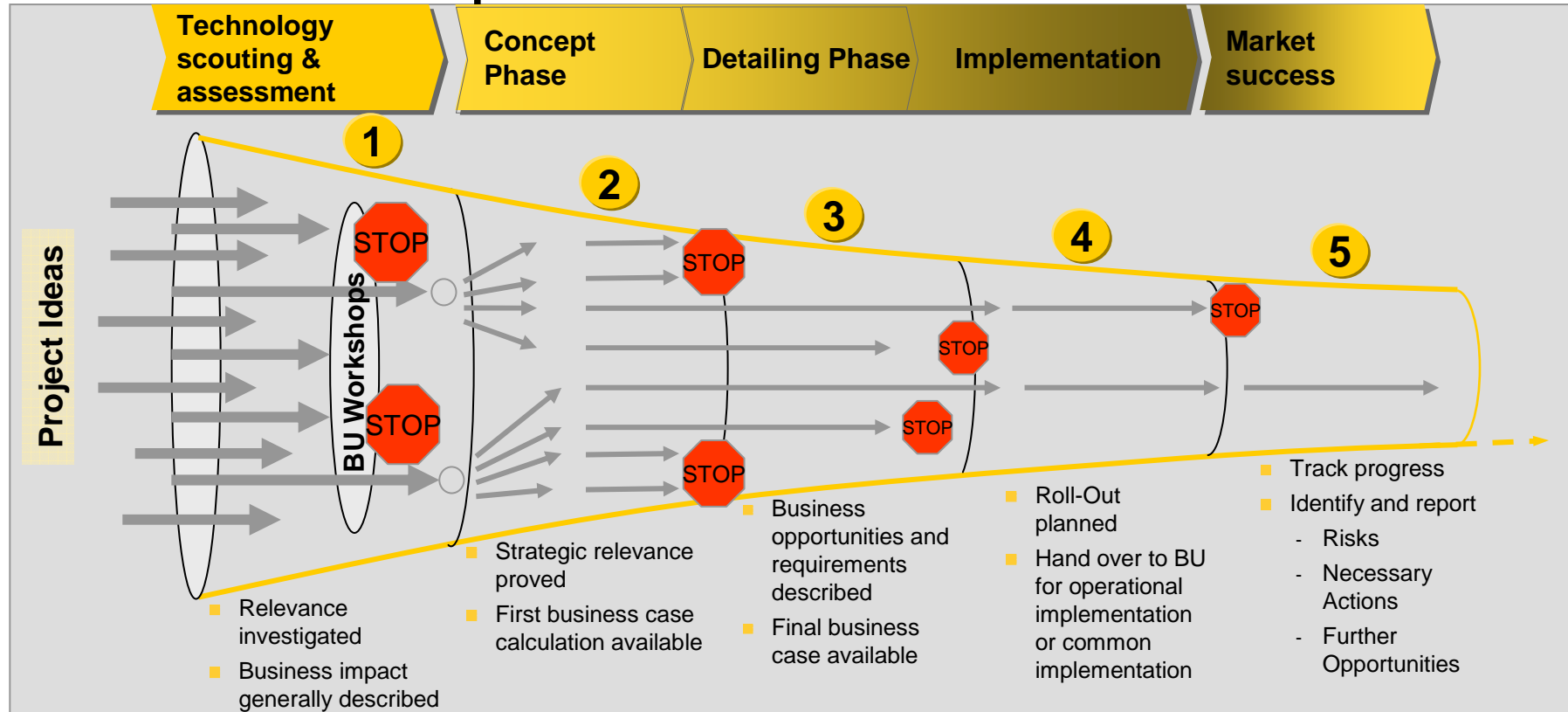
Innovation at TIM pre-dominantly aims to be an enabler and facilitator for cross business BU processes, products and services.

The value of innovation is mainly coming from adopting existing technologies, refining where beneficial and applying to processes and services.

* BD BU = Business Units Business Development

The innovation funnel is the most important tool to manage innovation in an effective, structured way

Innovation Selection process – Innovation Funnel



Key aspects following the funnel:

- Fill the pipeline by triggering the funnel entrance
- Kill the less promising projects as early as possible
- Allocate sufficient resources to the projects with superior success possibilities
- Making the innovation process visible and transparent to all stakeholders

Role of IT – Constructor or Obstructor

Challenges for IT from Innovation

- Increase in data volume and data decentralization (e.g. RFID)
- Data Structure Changes (e.g. new products)
- New User Interfaces and accessibility (e.g. Web GUI)
- Increased Information Protection Need (e.g. VoIP Security)
- Mobility and Flexibility in Usage (e.g. Blackberry, web interface)
- Higher Need for Integration into other systems (e.g. Web 2.0 approach)

Reaction of IT

- Flexible Architecture
- Reduced complexity (harmonized applications and platforms, central data base)
- Ensure quality first time (treat Innovation IT projects as standard projects – development methodology)
- IT Management of product life-cycle

Barriers

- Safeguarding stability and reliability of application landscape
- Lack of skilled resources
- Time to market
- Cost and budget restrictions

IT@DPWN

EXAMPLES

- IT organizational Structure
 - Strengthen Business Unit accountability for IT
 - Split IT demand and IT supply responsibility

- IT architecture
 - Flexible Infrastructure Set-Up with a reliable backbone
 - SOA architecture

- IT Management
 - Standard development methodologies
 - IT Portfolio Management and Roadmapping



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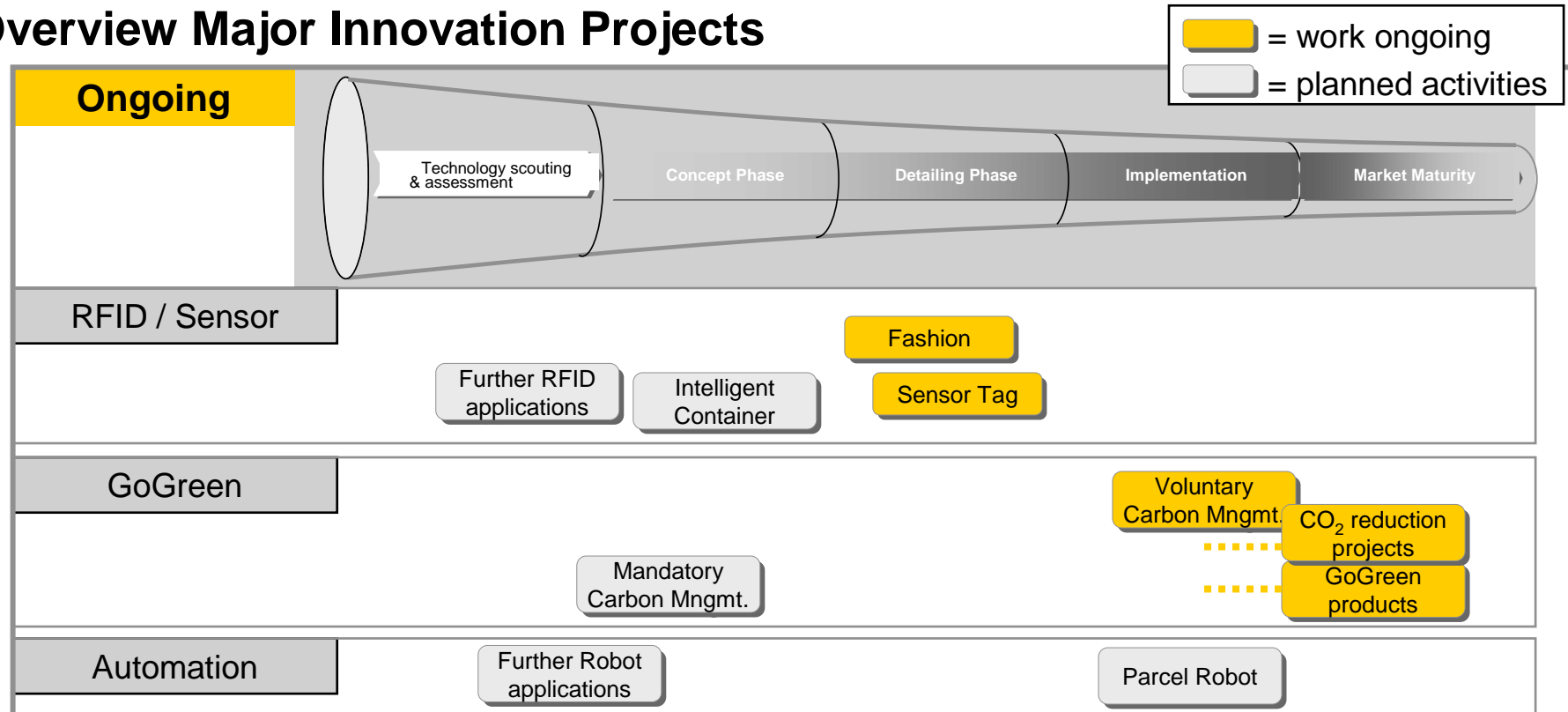
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Today, TIM focuses on two major programs with various projects being implemented. Further programs and projects are in scope and in preparation.

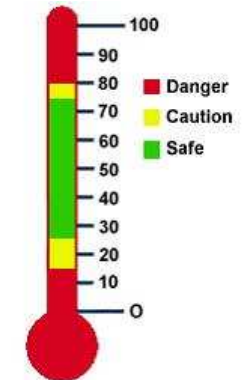
Overview Major Innovation Projects



Next possible programs / projects

Category	Projects
Geoservices	<ul style="list-style-type: none"> • Geo-Services Roadmap • Intelligent traffic management • Intelligent vehicles
Others	<ul style="list-style-type: none"> • Imaging technology • Nanoparticles • Speech Technology • Sensor Networks

Can RFID In Logistics Help To Save Lives?

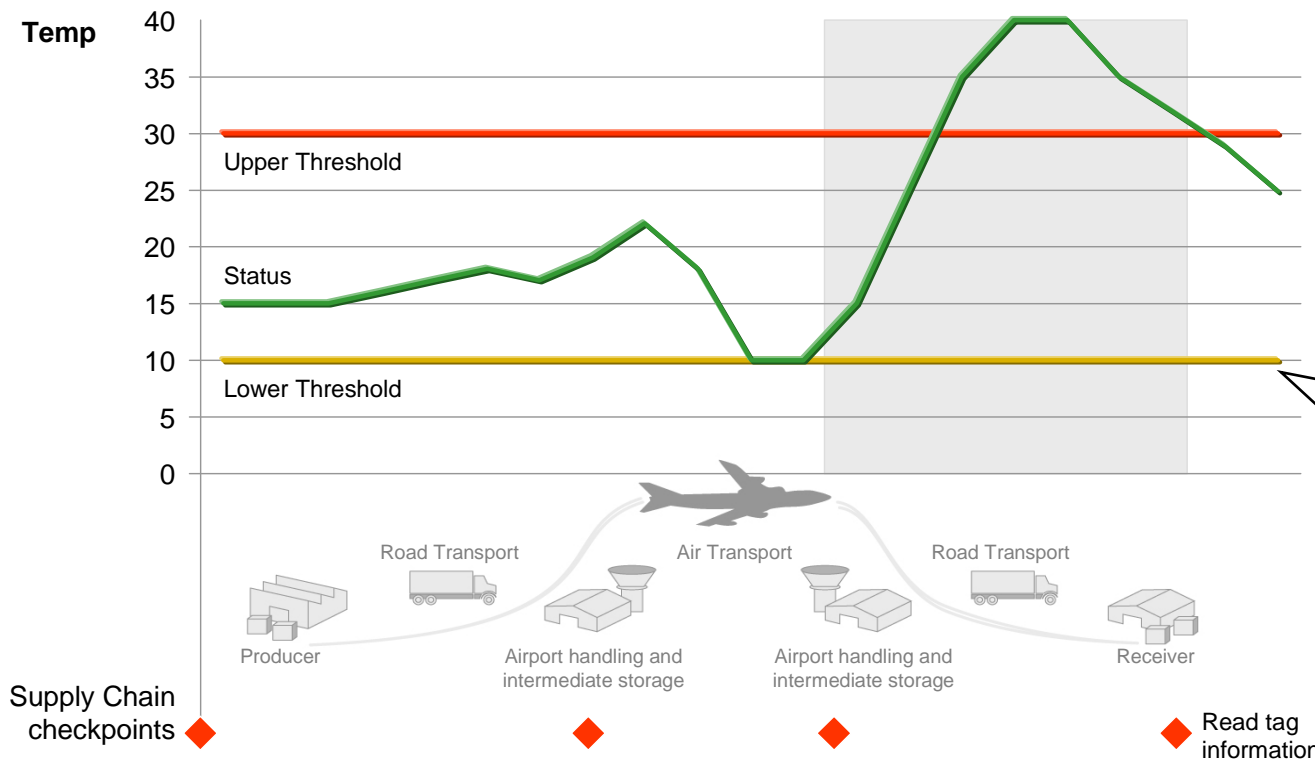


DHL Global Forwarding RFID Pharma Solution

Using RFID and temperature sensors to provide visibility on temperature status at defined transfer points during transport

Early information can enable immediate actions, local empowerment, decentral communication flows (i.e. send replacement shipment or cool down again)

Meet increasing regulations for product quality report (e.g. FDA)



First price from „RFID-Journal“ as best RFID innovation of 2006

The GOGREEN process implementation

Products and services



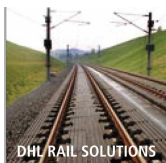
GOGREEN Pluspäckchen (private customer)



GOGREEN Tonnage/Cent



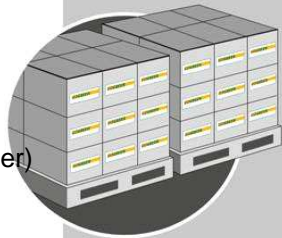
GOGREEN Express (business customer)



DHL Rail Solutions

Products and Services

By purchasing GOGREEN products customer reduces CO₂ emissions



+ CO₂ Emissions: 600 kg

e.g. for 100 Express shipments from US to EU

Carbon Management

Controls the certified process and internally trades with CO₂



Compensation

Carbon savings from - internal and - external CO₂ compensation are generated



- CO₂ Reduction 600 kg

e.g. 2,200 km with Biogas truck

Compensation projects internal



Alternative vehicles and fuels



external

Photovoltaic



Reforestation



The proof of originality of goods is key benefit to the manufacturing industry. The nano particles technology therefore originates new services for a logistics company.

Project „Marking and Identification of goods“

Luminescent Nano Particles: main advantages

Anorganic ceramics material which is acid-, thinner-, base-proof and resistant against any humidity and fluids

Temperature-resistant up to 2.200°C – undestructable through external cause

Can be plotted with every existing printing process (ink jet, sintering into metal, etc.)

Reading through thin materials possible (boards, plastics, synthetics etc.)

Cost-efficient alternative: bridging technology between barcode and RFID

Potential application areas under concept investigation

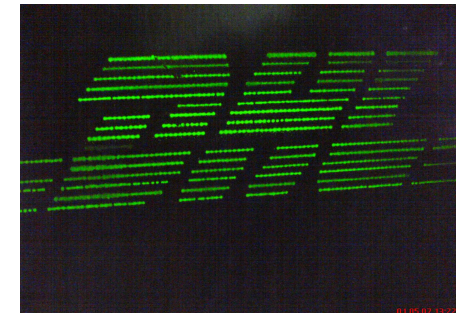
authenticity certification: unforgeable material to proof originality of goods, combination with barcoding is possible

Original manufacturer verification in case of customer complaints: plagiarism protection

Process chain controlling from resource to end product through reading of invisible nano coding
- retraceability of materials

documentation of single process steps – track and trace through light stimulation

Industry sectors under investigation: automotive, electronics, fashion and pharmaceutical industry



Picture 1: stimulated luminescent nano particles printed on metal



Picture 2: laser stimulated nano particles in powder form

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Innovation - Introductory

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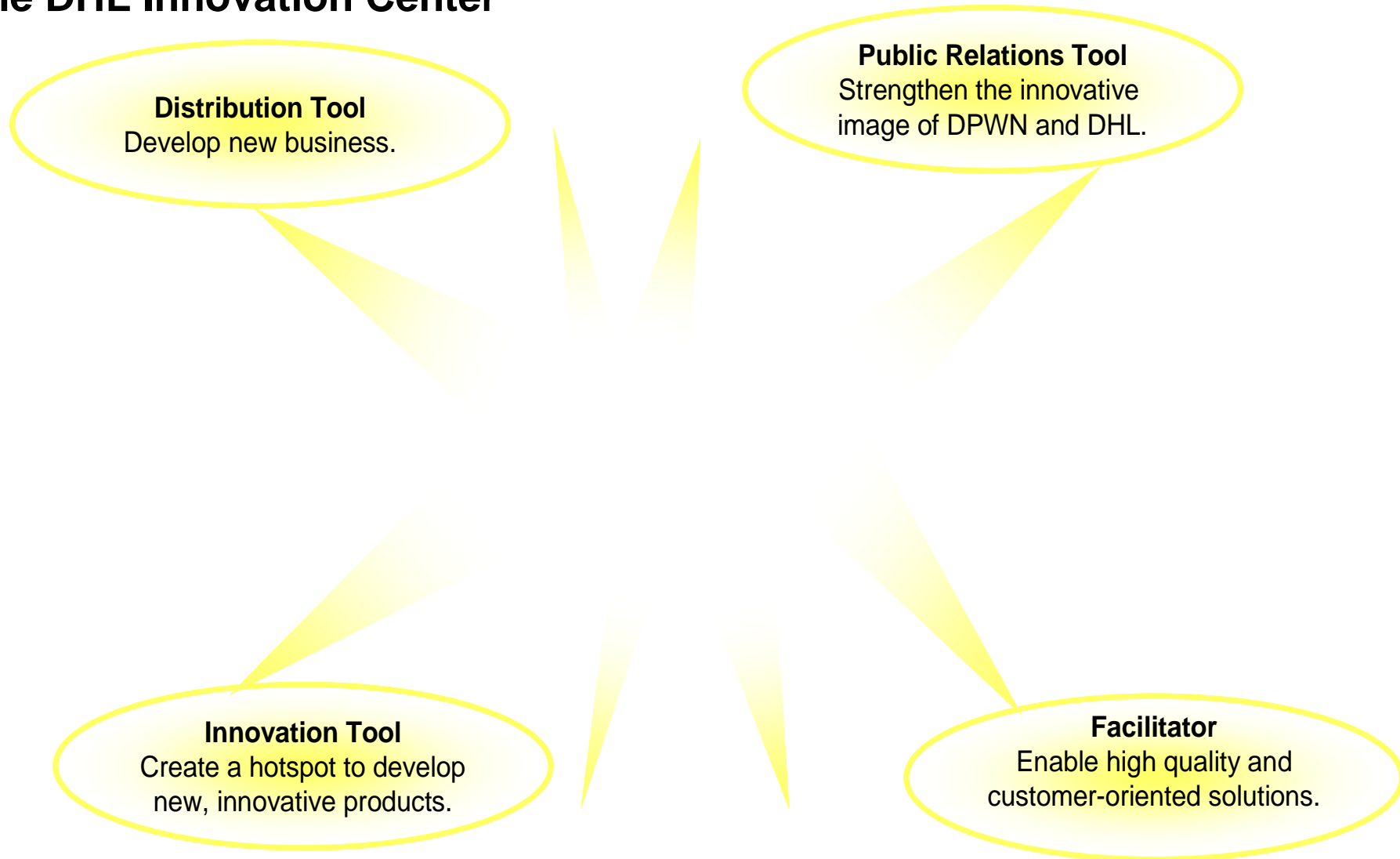
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The DHL Innovation Center shall be the “lighthouse” for innovation within DPWN and to the markets

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The DHL Innovation Center - [Trailer english big.mov](#)

