
V Fórum Discuta Lean

Lean: Um Conceito Integrado

Ronald M. Dauscha
Head - Fraunhofer Liaison Office Brazil
1.4.2019



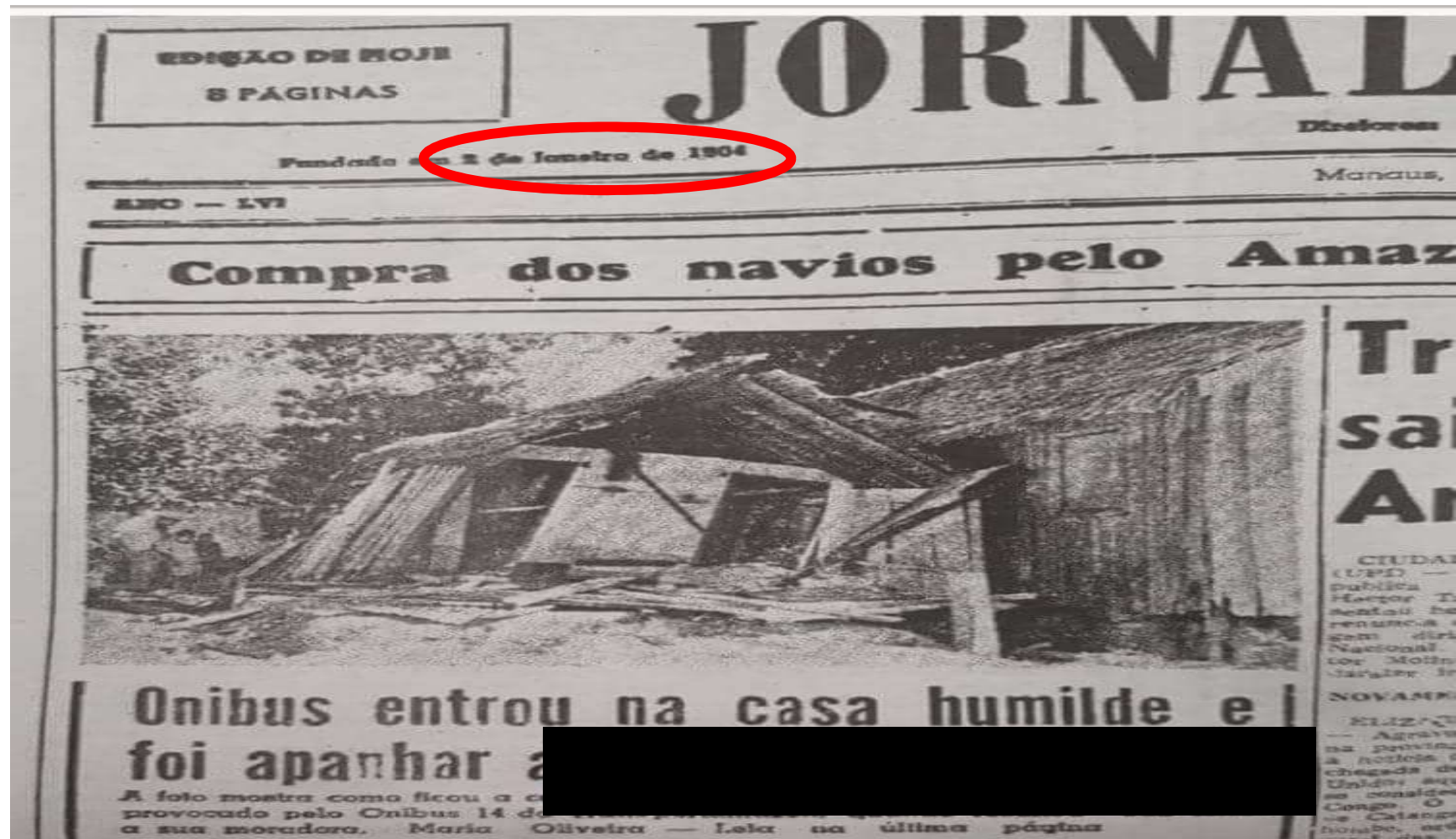


**Inovação como algo...
... antes de tudo!**

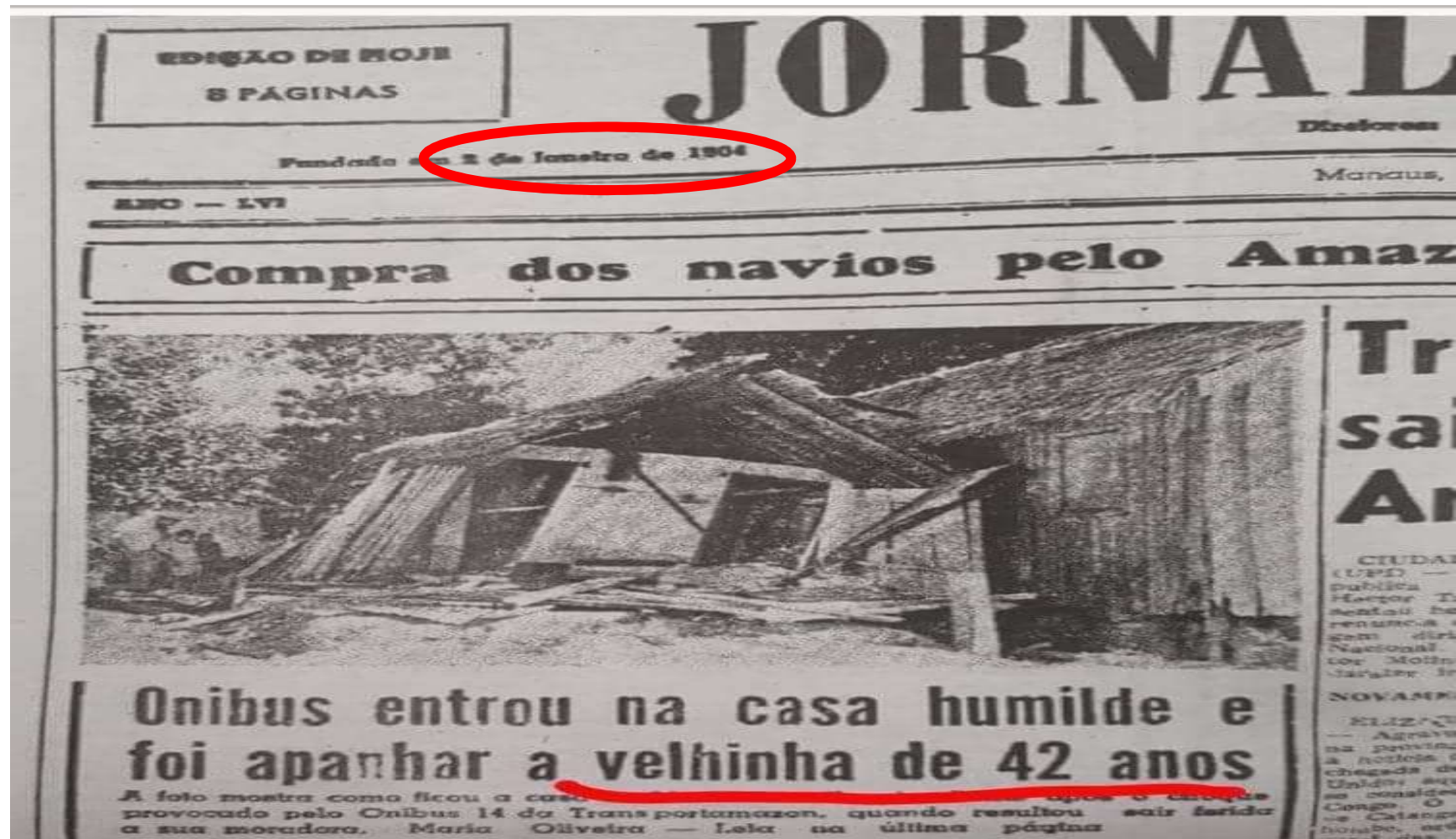


**É necessário concordar:
os padrões mudam!**

É necessário concordar: os padrões mudam!



É necessário concordar: os padrões mudam!



**E aceitar: o que sabemos hoje...
...não serve para nada!**



Singularity University / Summit 2017

**“O Vale do Silício tem uma palavra para descrever
fracasso:**

Se chama experiência!”



**E assim ser abertos a
reinvenções!**

Em algum momento vai ser necessário mudar!

- Inovação Radical (Disruptiva):
 - Origina novos mercados e novos modelos de negócios;
 - Altera as bases de competição existentes;
 - Geralmente é do tipo “*technology push*”.



Características Técnicas

3,6 kg
0.01 megapixels
23 seg de
processamento

Steven Sasson holding the
original digital camera
prototype (Credit: Steve
Kelly/Kodak)

US 4131919A de 20/05/1977

Ou inventar coisas novas!



Só que...Darwin tinha razão!



As desaparecidas



As atentas



GAFA
The BAADD companies
(*)

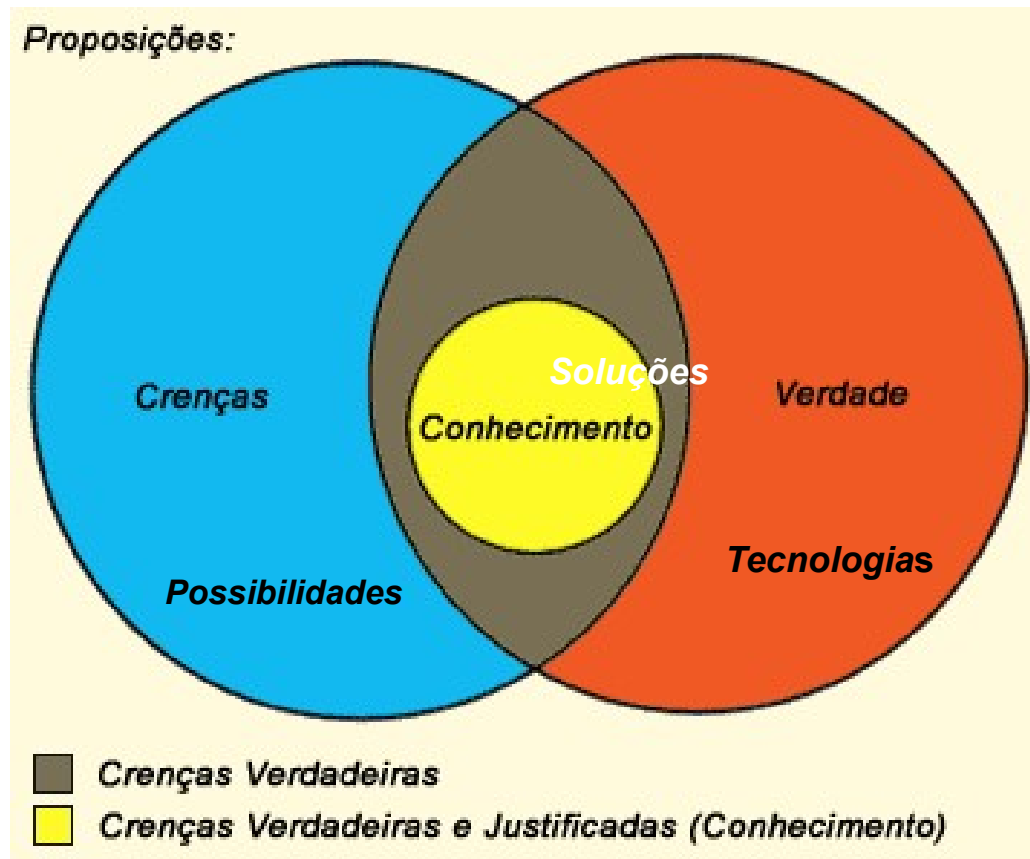
(*) Big, Anti-competitive, Addictive, Destructive to Democracy





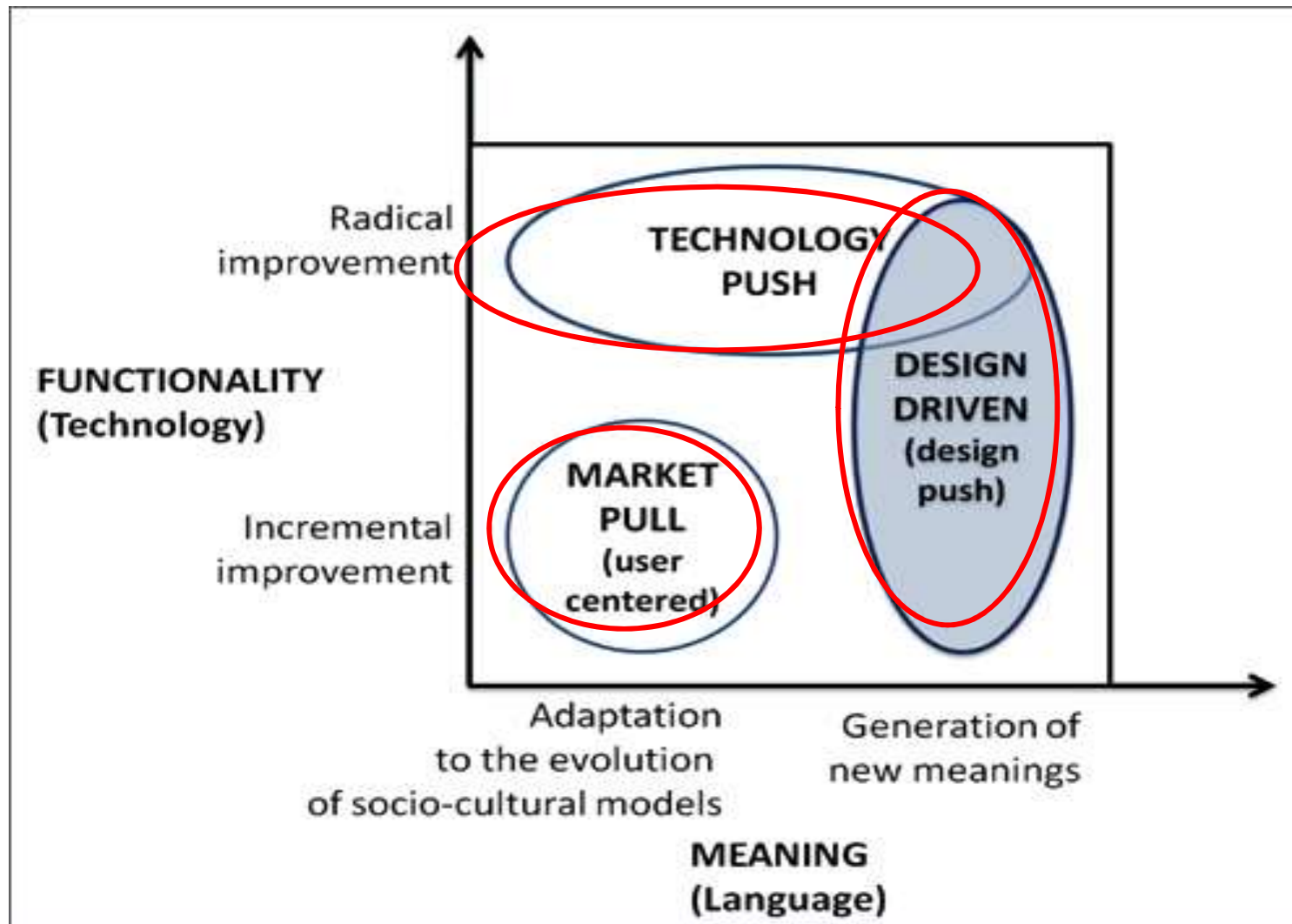
**E passar a considerar novos
Valores...**

O Valor do Conhecimento

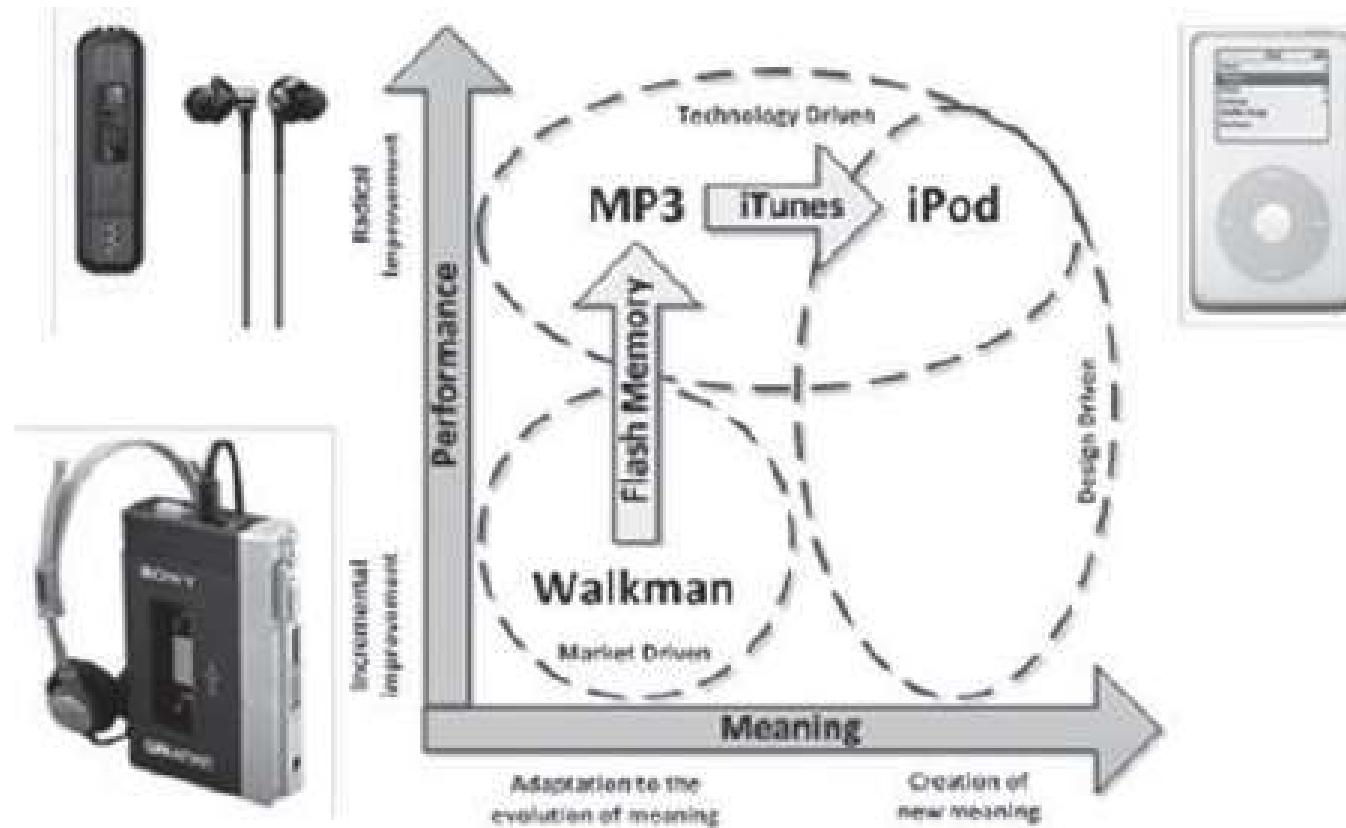


A definição clássica de **conhecimento**, originada em Platão, diz que ele consiste de crença verdadeira e justificada. Diagrama do Conhecimento. Em amarelo representa-se o conhecimento como um conjunto de crenças verdadeiras, que foram provadas e justificadas. Em marrom estão as crenças verdadeiras, mas ainda não provadas. Em azul representam-se **as crenças falsas**, e em vermelho, **as verdades desconhecidas**

O Valor da Demanda



O Valor da Demanda



O Valor dos Erros

Sem erro não há aprendizado!

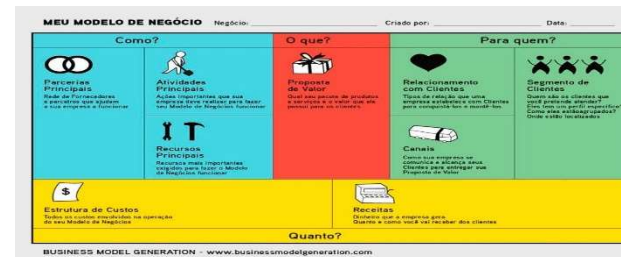
**Como vamos entender o que é certo,
sem antes perceber como seria o errado?**



O importante é simular para reduzir os riscos!

O Valor da Dicotomia e das Contribuições

	Fatores positivos	Fatores negativos
Fatores internos	S Strengths (força)	W Weaknesses (fraquezas)
Fatores externos	O Oportunities (oportunidades)	T Threats (ameaças)





O que é a tal da Inovação?

É uma melhoria **Incremental ou Disruptiva**, em **Processo, Produto, Solução, Serviço ou Modelo de Negócio**, a partir do **Cliente, Dentro e Fora** da Empresa, realizada com **Recursos Internos e/ou Externos** e que traga uma **Nova ou Melhorada Nota Fiscal**.

R. M. **Dauscha** (up-grading of Frascatti and Oslo)

Classificação de acordo com a intensidade da Inovação

	Tipo A - Radical Cria uma nova industria (extrapola as necessidades do consumidor)
	Tipo B - Radical Muda a base de competição na industria existente
	Tipo C - Incremental Estritamente alinhado com as necessidades do consumidor

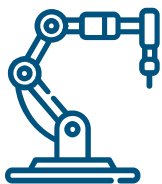
Tipologia 3M para Inovações em Produto

Inovação Estratégica

Ter inovação como parte essencial da estratégia da empresa exige forte mudança de cultura com relação a recursos humanos, pois as pessoas constituem a única fonte de ideias.



Os IMPULSIONADORES da Revolução Tecnológica



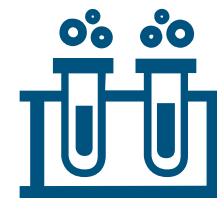
FÍSICOS

- Veículos autônomos
- Impressão 3D
- *Smartphones*
- Robótica avançada
- Novos materiais
- Drones



DIGITAIS

- *IoT*
- Plataformas
- Redes
- *Bigdata*
- *Cloud computing*
- *Blockchain*



BIOLÓGICOS

- Engenharia genética
- Biologia sintética
- Diagnósticos
- Edição biológica
- Tecnologia implantável
- Biotecnologia





Comparação com o Movimento de Qualidade:

Técnica Ocidental

①

Responsabilidade da qualidade é de um pequeno grupo de especialistas, os “inspetores de qualidade”

Técnica Japonesa

②

Métodos e processos que tornaram a qualidade responsabilidade dos “soldados rasos”

①

Trabalhadores comuns são pagos para executar

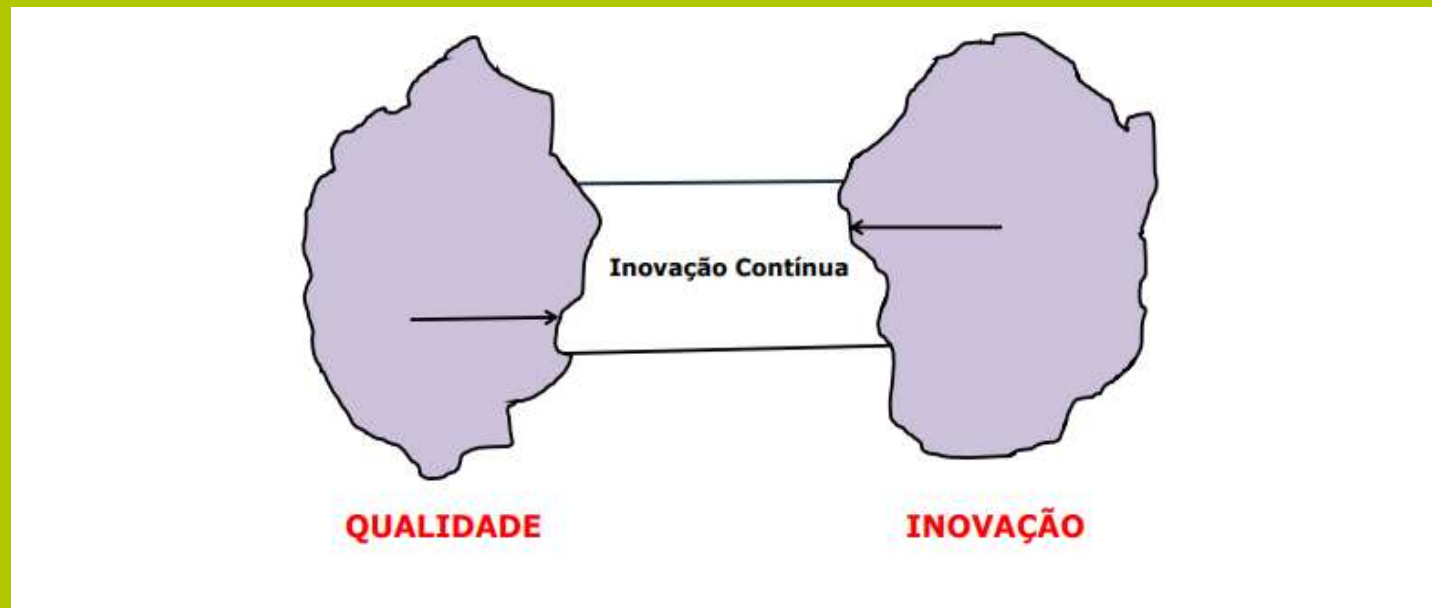
②

Trabalhadores comuns são pagos para executar e pensar

Características de uma Organização Inovadora

- A inovação permeia toda a corporação (como acontece com a qualidade)
- Têm uma infra estrutura sistêmica para a inovação que começa pelo CEO e se infiltra por toda a organização
- Essa infra estrutura torna todas as pessoas da organização responsáveis por promover e alimentar a geração de idéias

Construindo uma ponte entre dois mundos





**A Organização e...
...suas Necessidades...
...para terem Sucesso!**

Evolução via Inovação

	Estratégia	Gestão	Tecnologia	RH
Alta Direção	Change Mgmt. / Competitividade			
Cliente				
Criação				
Operação				

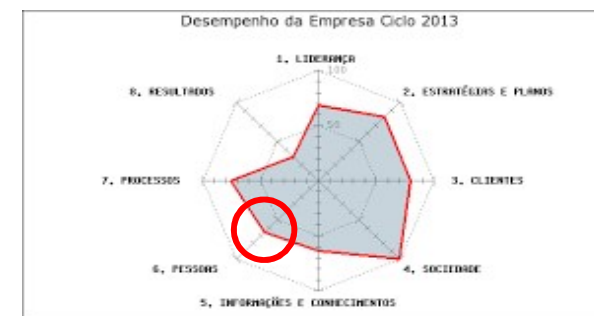
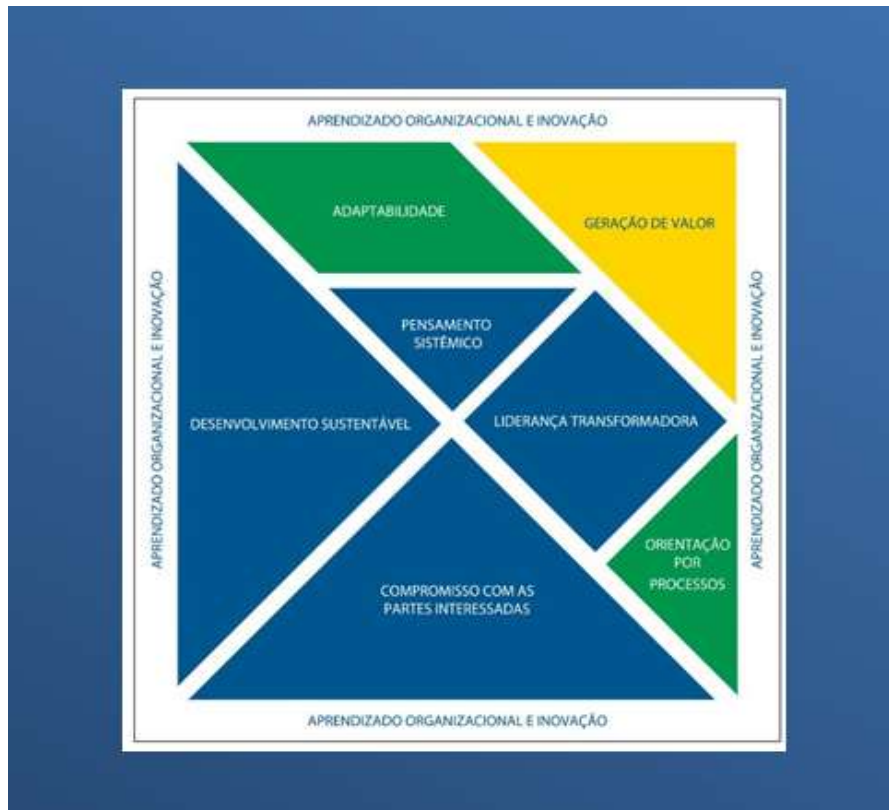
Change Management / Competitividade

- Avaliar se há **produtos novos** a serem implementados na atual linha
- Avaliar se há **inovações incrementais** a serem implementadas na atual linha
- Avaliar se há **inovações disruptivas** a serem implementadas para as atuais linha
- Avaliar se **novos segmentos** devam ser abordados
- Avaliar, se no caso de abordar **novos segmentos**, quais tipos novos de **produtos – existentes (no mercado) ou diferenciais**, podem ser lançados
- Avaliar se deve ser adotada uma nova **estratégia de internacionalização**
- Avaliar se há **papéis novos** que as unidades no exterior devem / possam assumir

Evolução via Inovação

	Estratégia	Gestão	Tecnologia	RH
Alta Direção	Change Mgmt. / Competitividade	M E G		
Cliente				
Criação				
Operação				

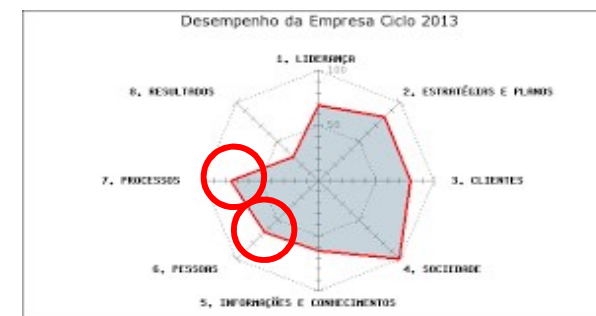
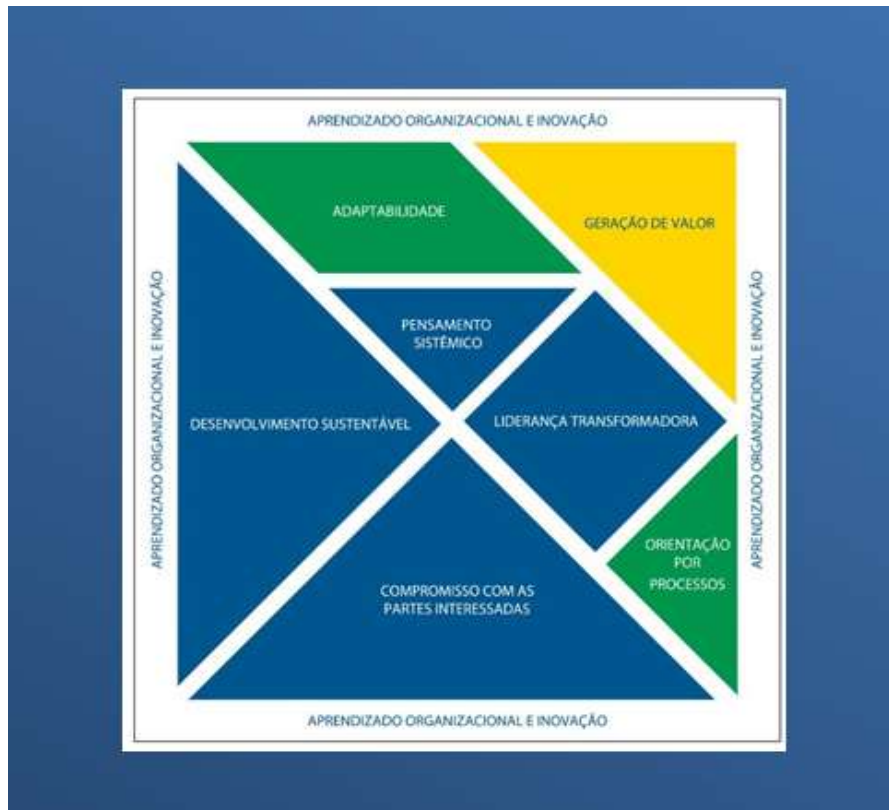
Radar MEG (FNQ)



Evolução via Inovação

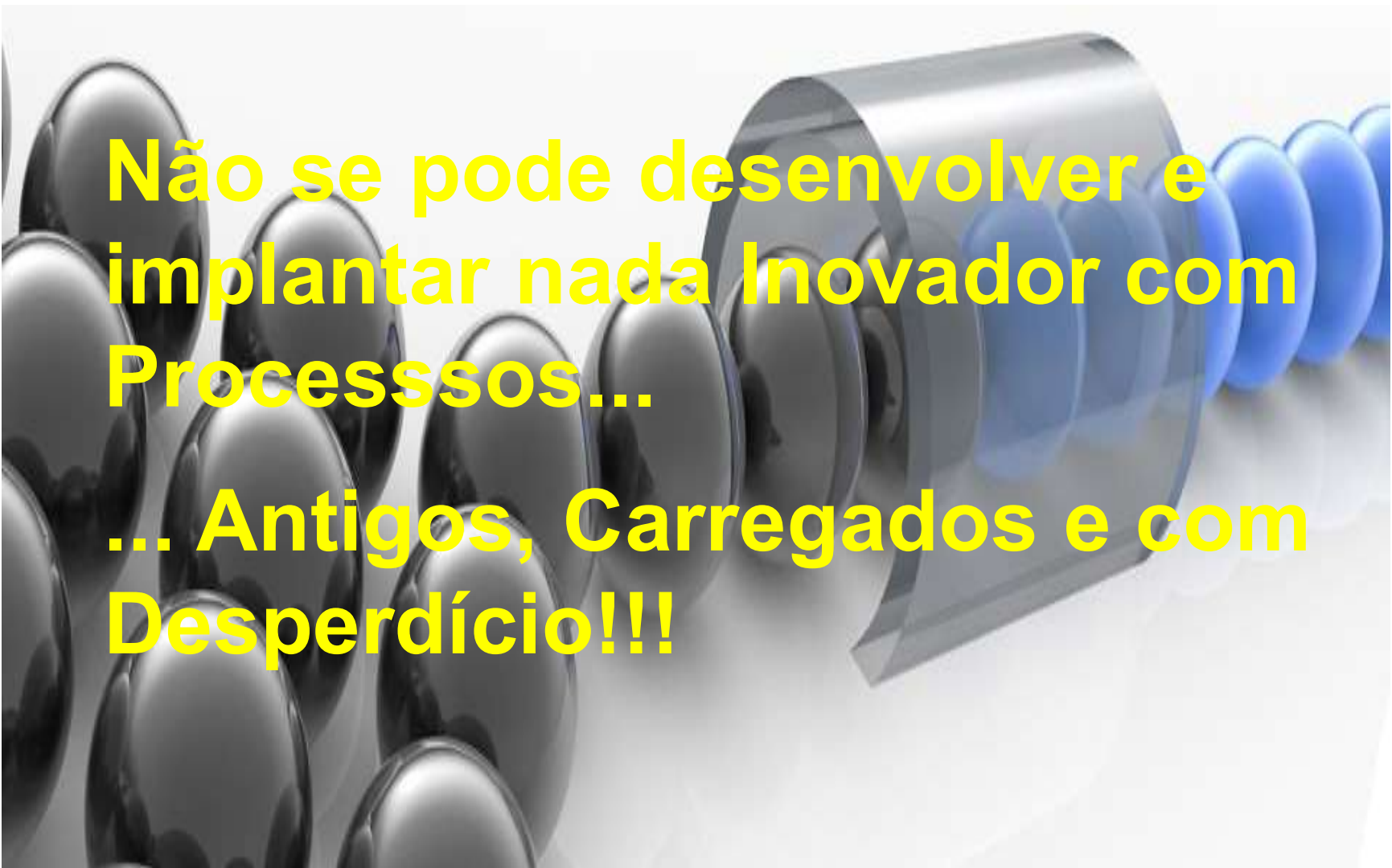
	Estratégia	Gestão	Tecnologia	RH
Alta Direção	Change Mgmt. / Competitividade	M E G		C u l t u r a
Cliente				
Criação				
Operação				

Radar MEG (FNQ)





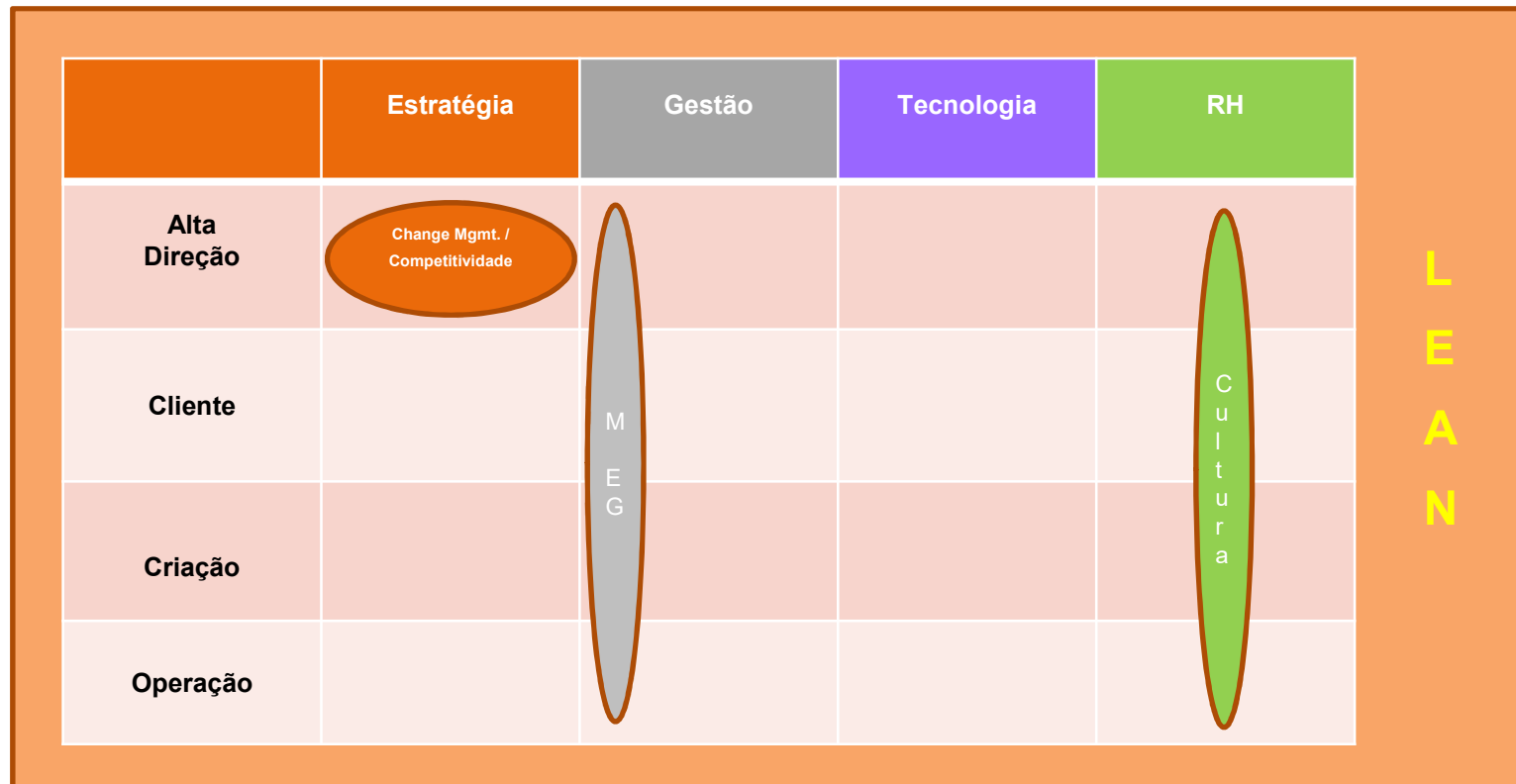
**A partir daqui, sem Lean...
não se prossegue!!!**



**Não se pode desenvolver e
implantar nada Inovador com
Processos...**

**... Antigos, Carregados e com
Desperdício!!!**

Evolução via Inovação



Aplica-se as mesmas Ferramentas e Princípios:

5S

Mapeamento de Processos

Fluxo de Valor

JIT

Kanban

Kaizen

Jidoca

Poka Yoke

TPM

OEE

Bem como os demais Métodos e Ferramentas:

Análise Modal de Falhas e seus Efeitos (FMEA)

TOPS/8D (Team Oriented Problem Solution/8 Disciplines)

Padronização ou Trabalho Uniformizado

Heijunka ou Programação Nivelada

Gestão a Vista e Controle Visual

The 5 Whys (Os cinco porquês)

Fluxo Contínuo de Informações

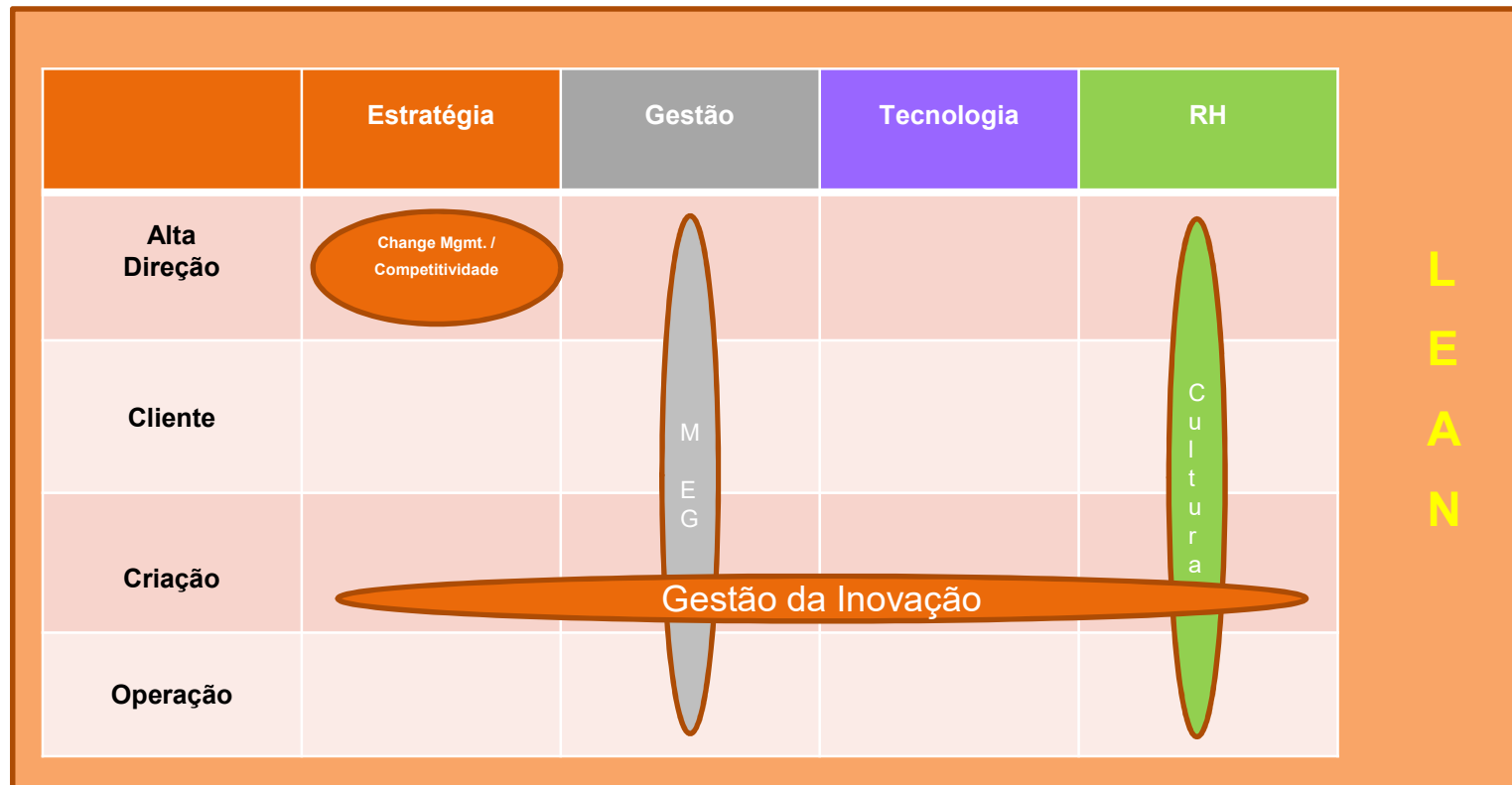
Sincronização com o Takt Time

Diagrama de Causa-Efeito

Trabalho em Células

Sistema Pull

Evolução via Inovação



Gestão da Inovação

- Base para este **Processo** é ”para o que a Empresa está disposta”
- Muito comum haver **realimentação** durante a Gestão da Inovação
- Antes de iniciar os trabalhos é necessário ter **maturidade** envolvida
- Definição de **possíveis parceiros** para o desenho e implantação
- **Escolha pela Alta Direção (AD)** das melhores consultorias

Gestão da Inovação (metodologias)

SWOT

CANVAS

BENCHMARKING

DESIGN THINKING

AGILE

SCRUM

DESIGN DRIVEN INNOVATION

INOVAÇÃO ABERTA

BENCHMARKING

REDES DE COOPERAÇÃO

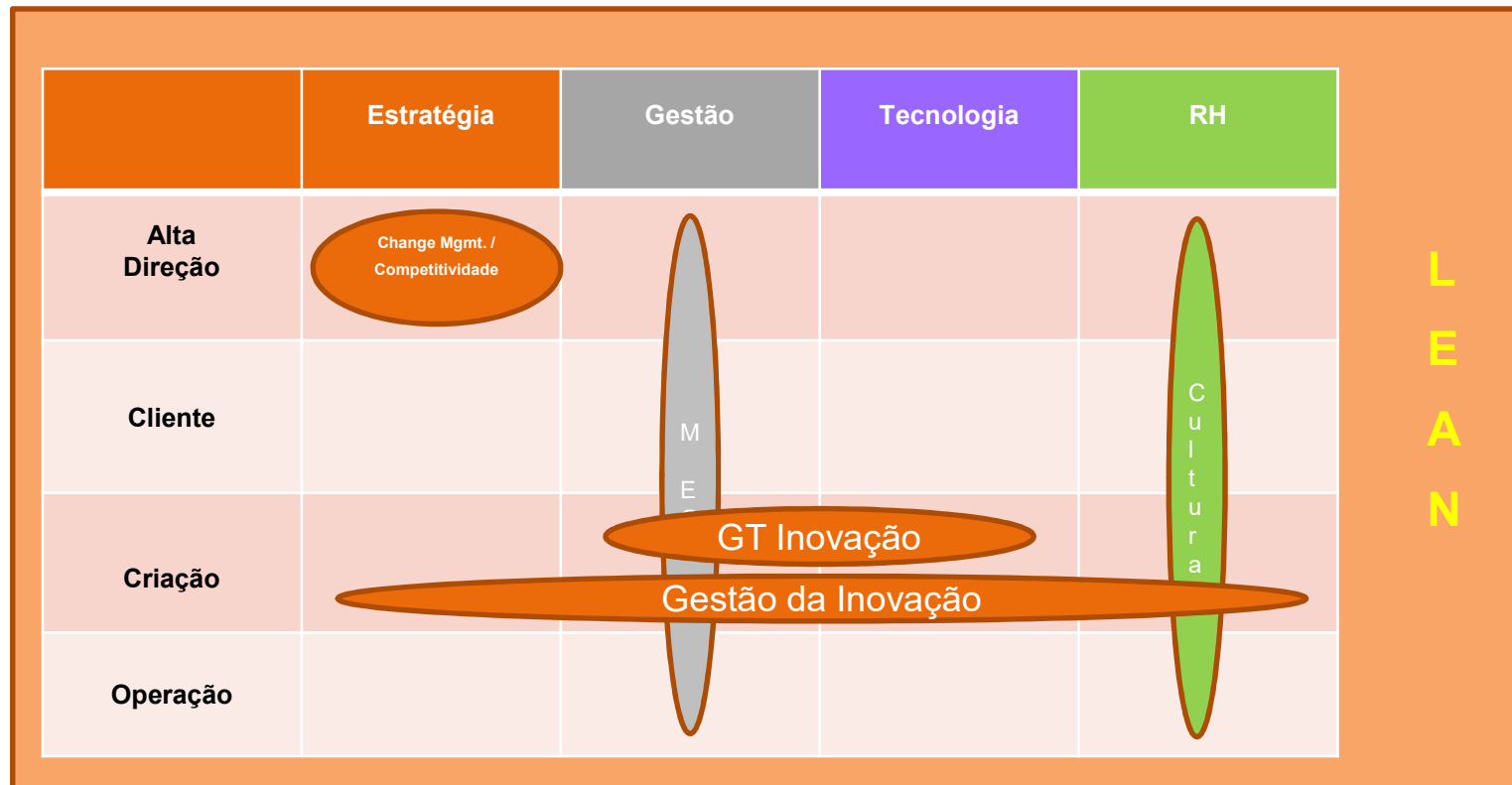
GERAÇÃO DE IDEIAS

....

Gestão da Inovação (metodologias)

- Base para este **Processo** é "para o que a Empresa está disposta"
- Muito comum haver **realimentação** durante a Gestão da Inovação
- Antes de iniciar os trabalhos é necessário ter **maturidade** envolvida
- Definição de **possíveis parceiros** para o desenho e implantação
- **Escolha pela Alta Direção (AD)** da melhor consultoria
- Detalhamento e desenho do **programa de trabalho** nos limites da AD
- Coordenação e definição em conjunta com um grupo maior uma **Estratégia de Inovação**
- Início de **ações menores e pilotos de resultado** para **validação**
- **Correção e fortalecimento** do processo
- **Avaliação sistemática de indicadores e resultados** pela AD

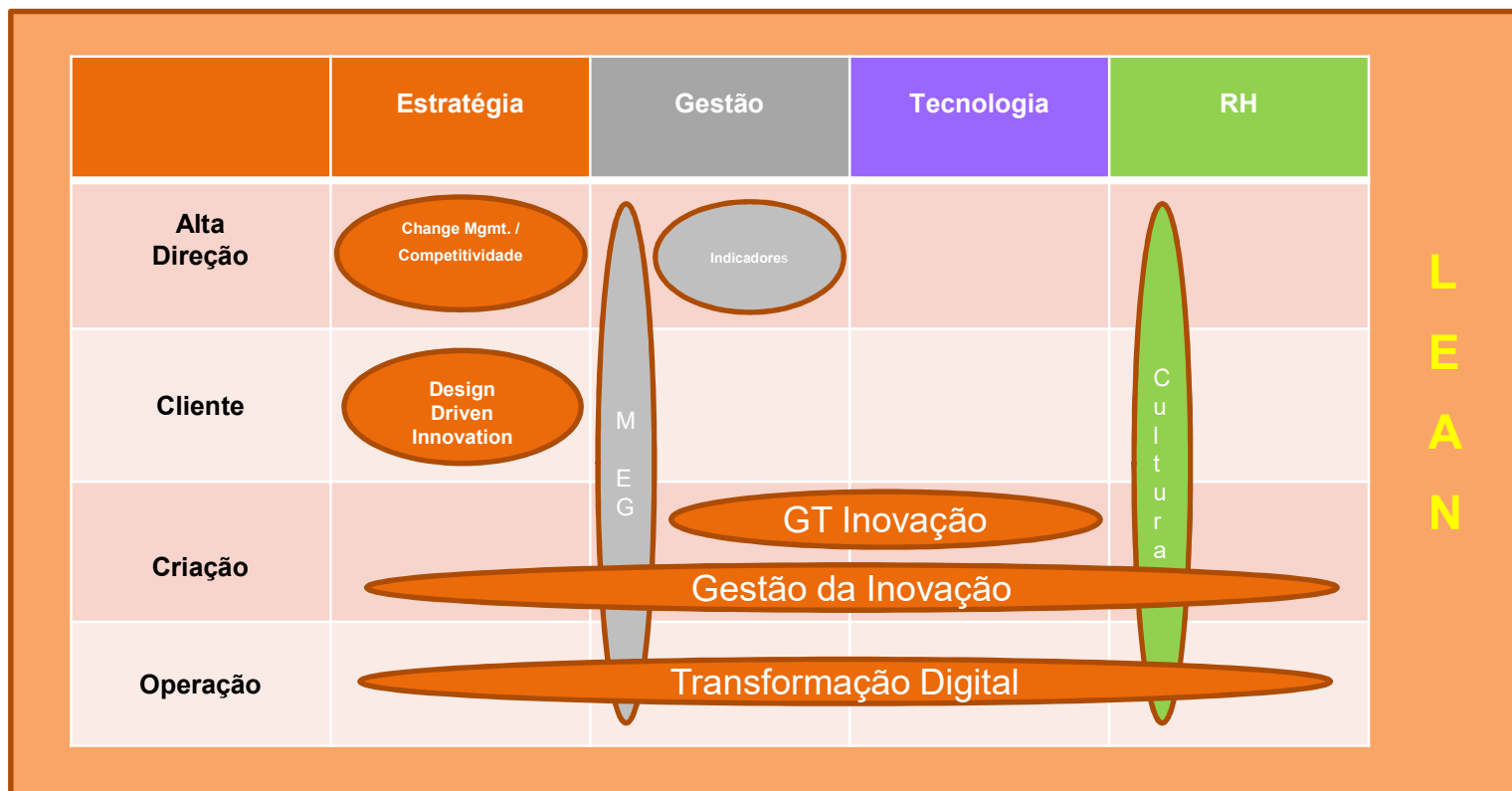
Evolução via Inovação



Grupo de Trabalho de Inovação => Núcleo de Inovação

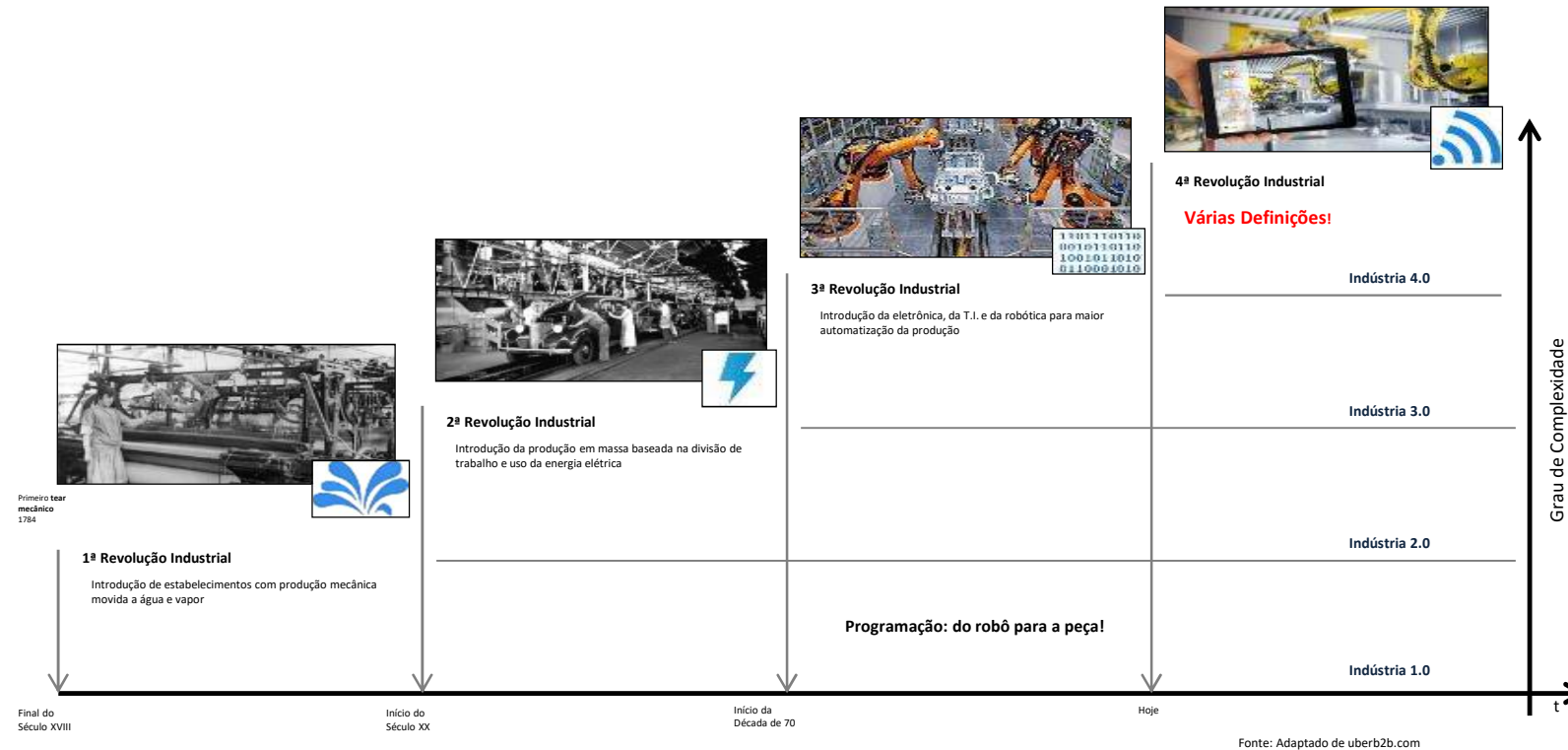
- **Aproveitar a “maturidade”** da etapa anterior
- **Aproveitar integrantes** do atual Grupo de Trabalho de Inovação
- Avaliar se há **inovações disruptivas** a serem implementadas para as atuais linhas
- Avaliar se **novos segmentos** devam ser abordados
- Avaliar, se no caso de abordar **novos segmentos**, quais tipos novos de **produtos – existentes (no mercado) ou diferencias**, possam ser lançados
- Avaliar se deve ser adotada uma nova **estratégia de exportação**
- Avaliar se há **papéis novos** que a unidade do **México** possa assumir

Evolução via Inovação



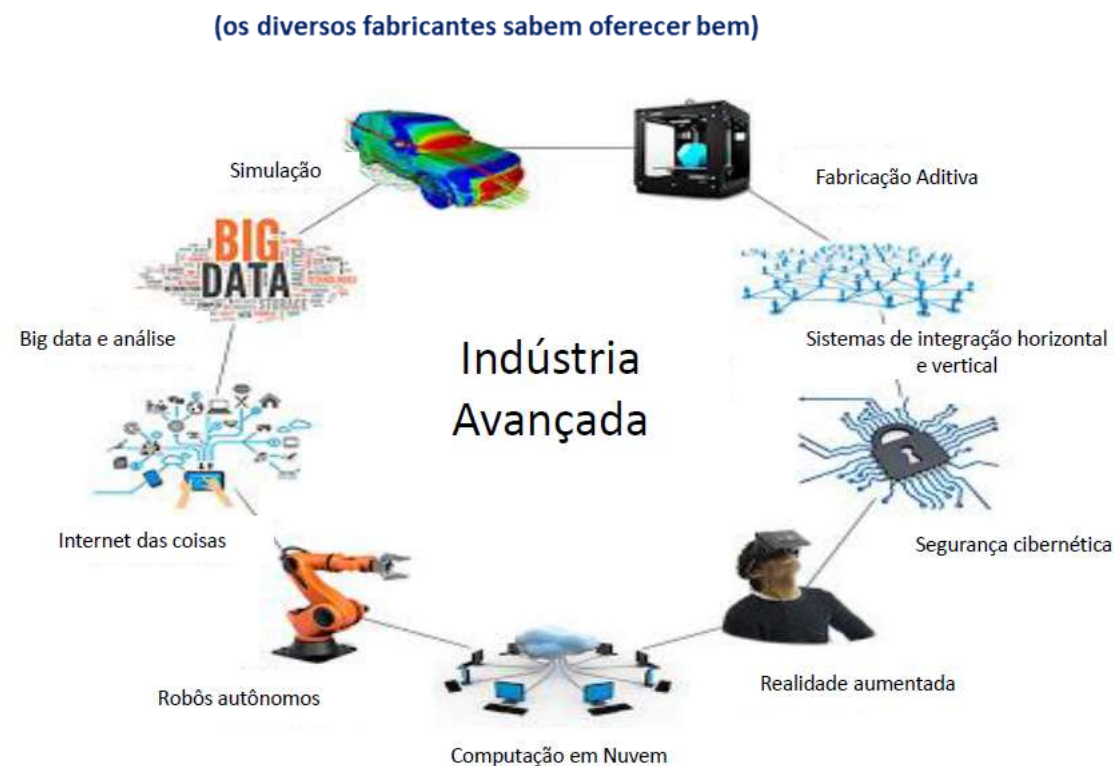
Transformação Digital

A partir de Conceitos...



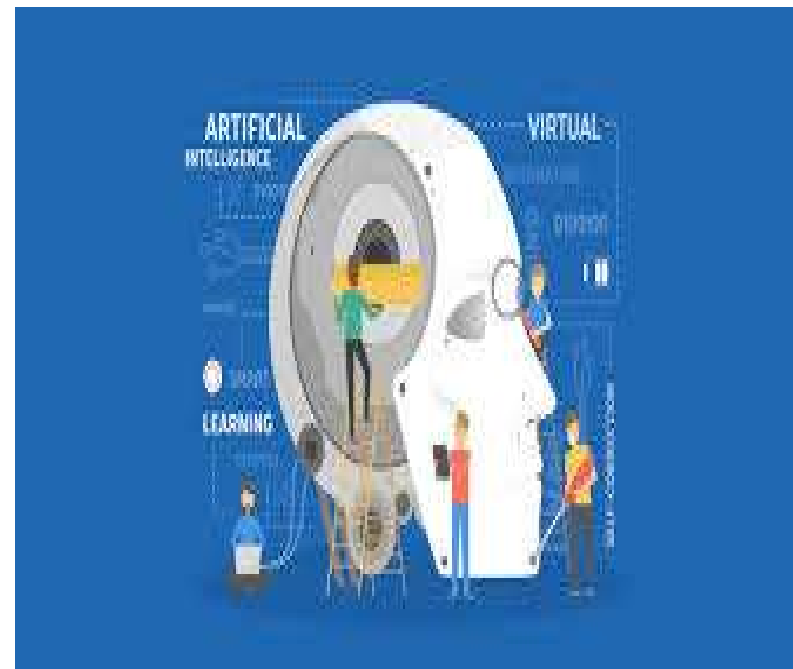
Transformação Digital

A Partir da Cesta de Componentes...



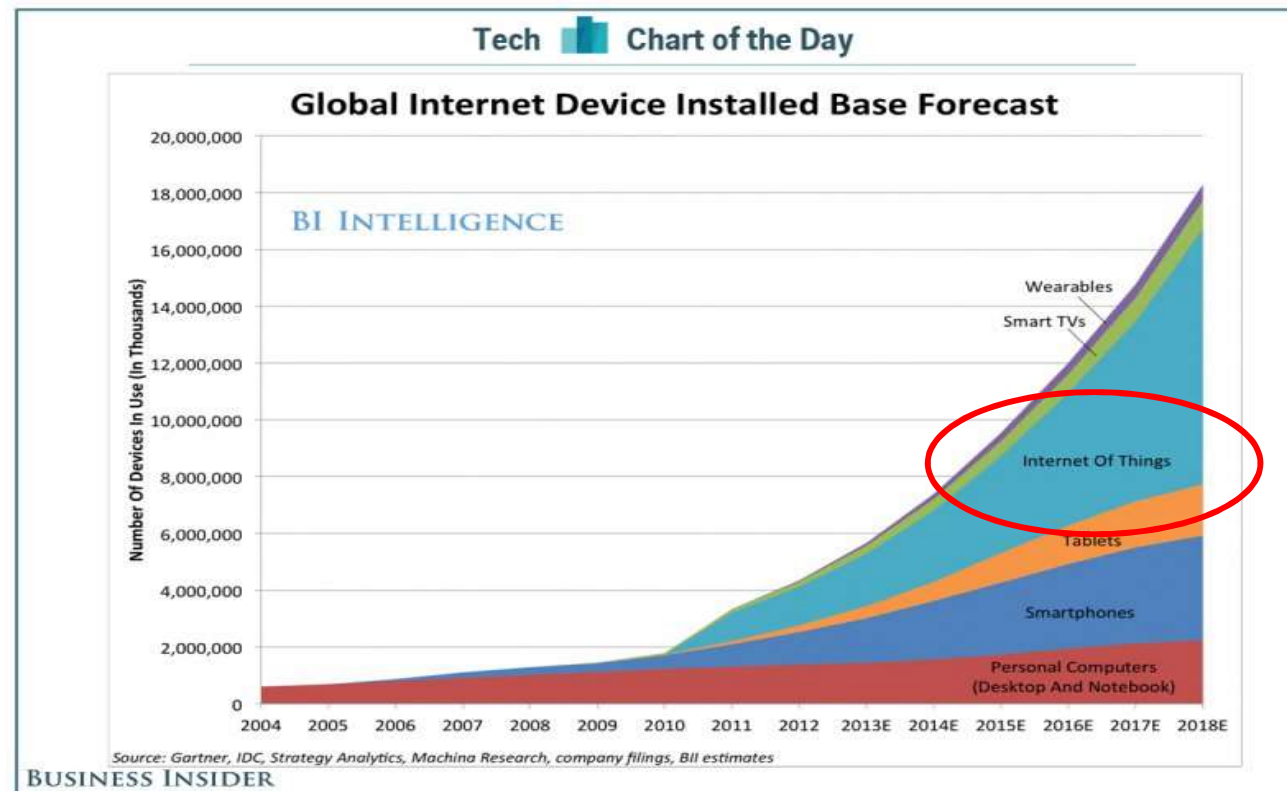
Transformação Digital

A partir da Tecnologia...



Transformação Digital

A partir da Tecnologia...



Transformação Digital

A partir dos Benefícios...

Atendimento de requisitos de consumidores individuais

- da matéria prima ao cliente

Marketing Digital

Flexibilidade – configuração dinâmica dos
processos de negócio

Otimização das tomadas de decisão
(cada vez mais autônomas)

Transparência de toda a cadeia em tempo real

Recursos produtivos e eficientes – otimização contínua

Oportunidades para novos serviços – Big Data, algoritmos inteligentes

Indústrias com altos salários e ainda competitivas

Novos negócios e serviços em constante geração criativa

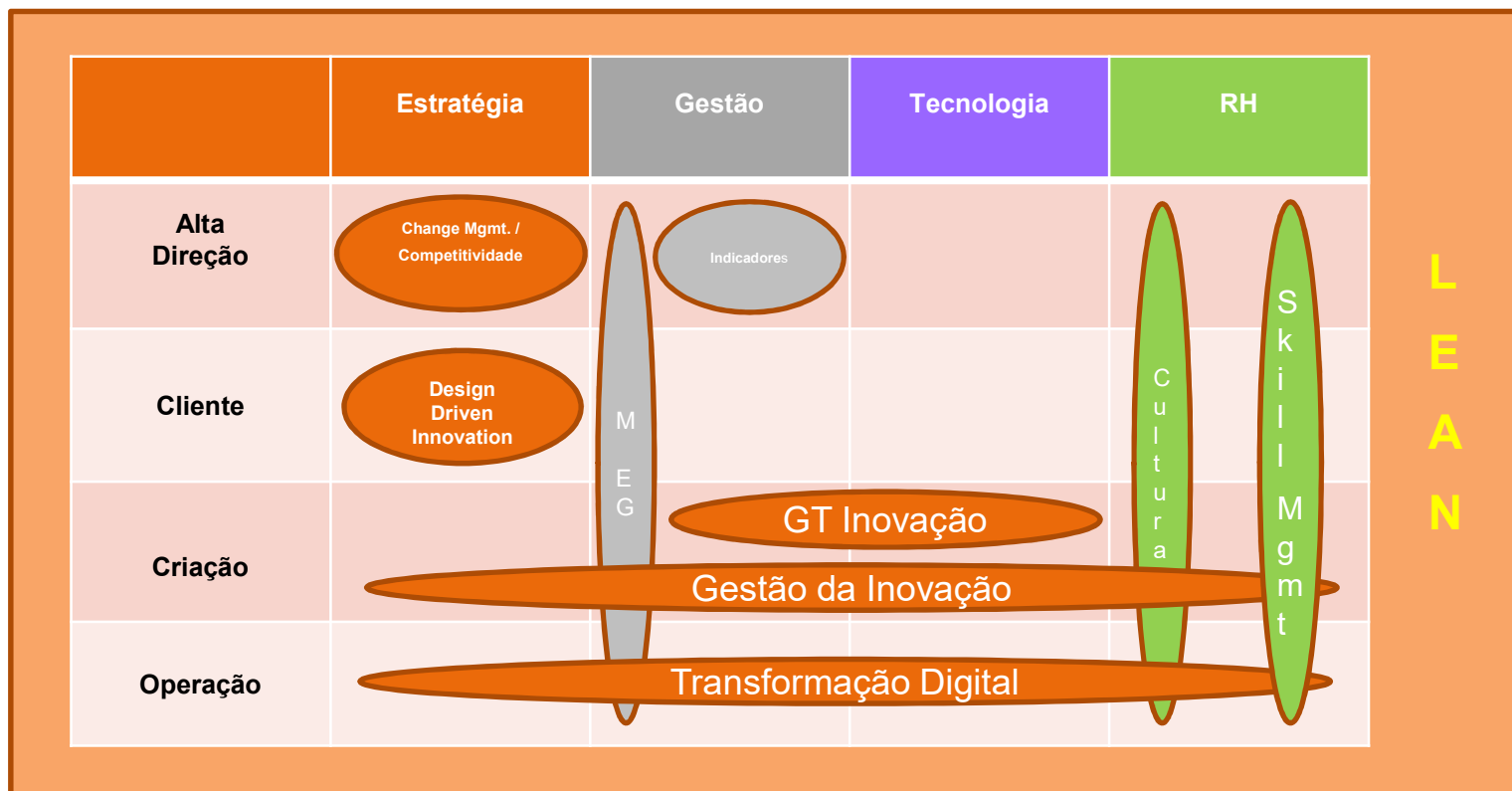
Garantia do futuro da indústria brasileira

Rastreabilidade e Economia Circular



Foto: Fraunhofer IFF

Evolução via Inovação



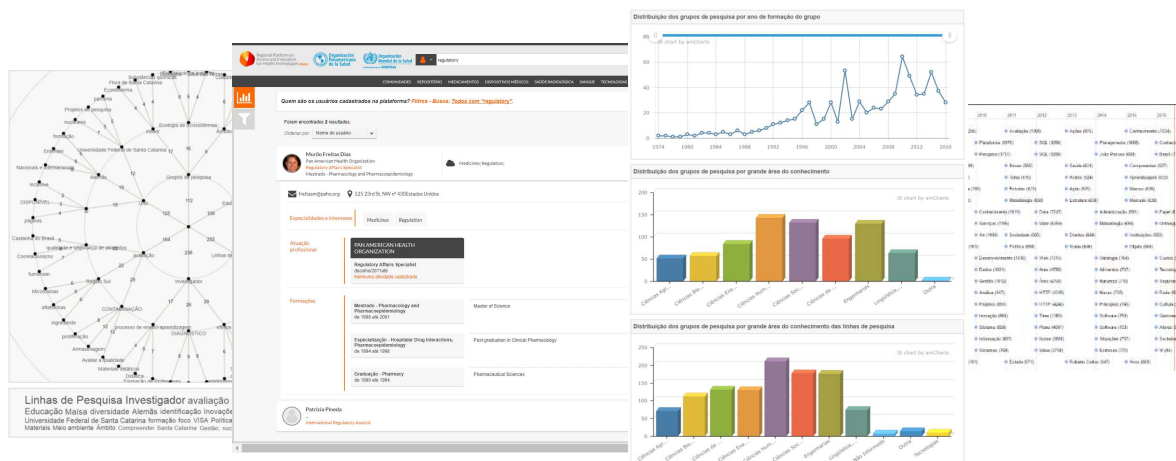
RH – Resultados Humanos

Skill Management

Innov@Skilss

Plataforma de Inteligência Colaborativa

Visão integrada do conhecimento e instrumentalização de redes de coprodução e inovação



- ✓ Integração *invisível* e *inteligente* de informações internas e externas sobre pessoas, organizações e conteúdos
- ✓ Recuperação de conteúdos e localização de pessoas para a formação de grupos de trabalho
- ✓ Disponibilização de perfis e conhecimentos de interesse para viabilizar colaboração
- ✓ Recursos para análise do capital humano e relacional

Recursos Externos

Start-Ups já nascem Inovando!

"Startups são iniciativas que optam por buscar novos modelos de negócio, representam a velocidade de mudança dos novos tempos e influenciam na construção de novos conhecimentos e até mesmo revolucionam mercados."

Marcelo Pimenta - ESPM



E o Brasil vai Evoluir!

Business /Non-Business R&D as a % of regional GDP



Quem é a...
Rede Fraunhofer de
Pesquisa Aplicada?

A Fraunhofer-Gesellschaft

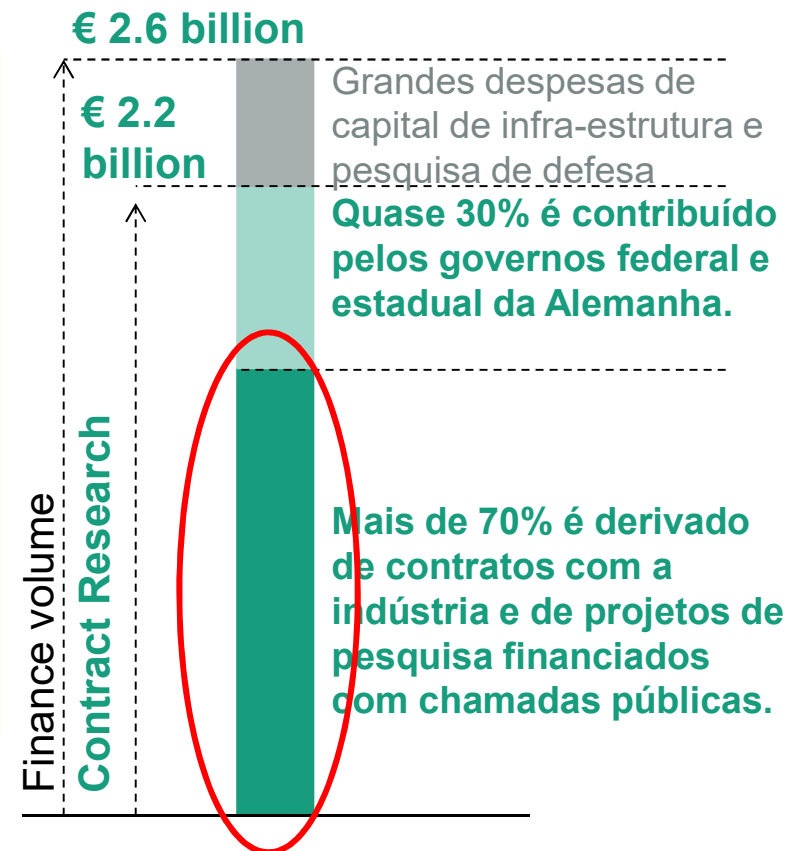
A Fraunhofer-Gesellschaft realiza pesquisa aplicada de utilidade direta para empresas públicas e privadas e de benefício amplo para a sociedade.



26,600
colaboradores



72 institutos e unidades de pesquisa



The German R&D Innovation Chain

1. Basic research

2. Application-oriented research

3. Industrial application



creates **basic innovations**.

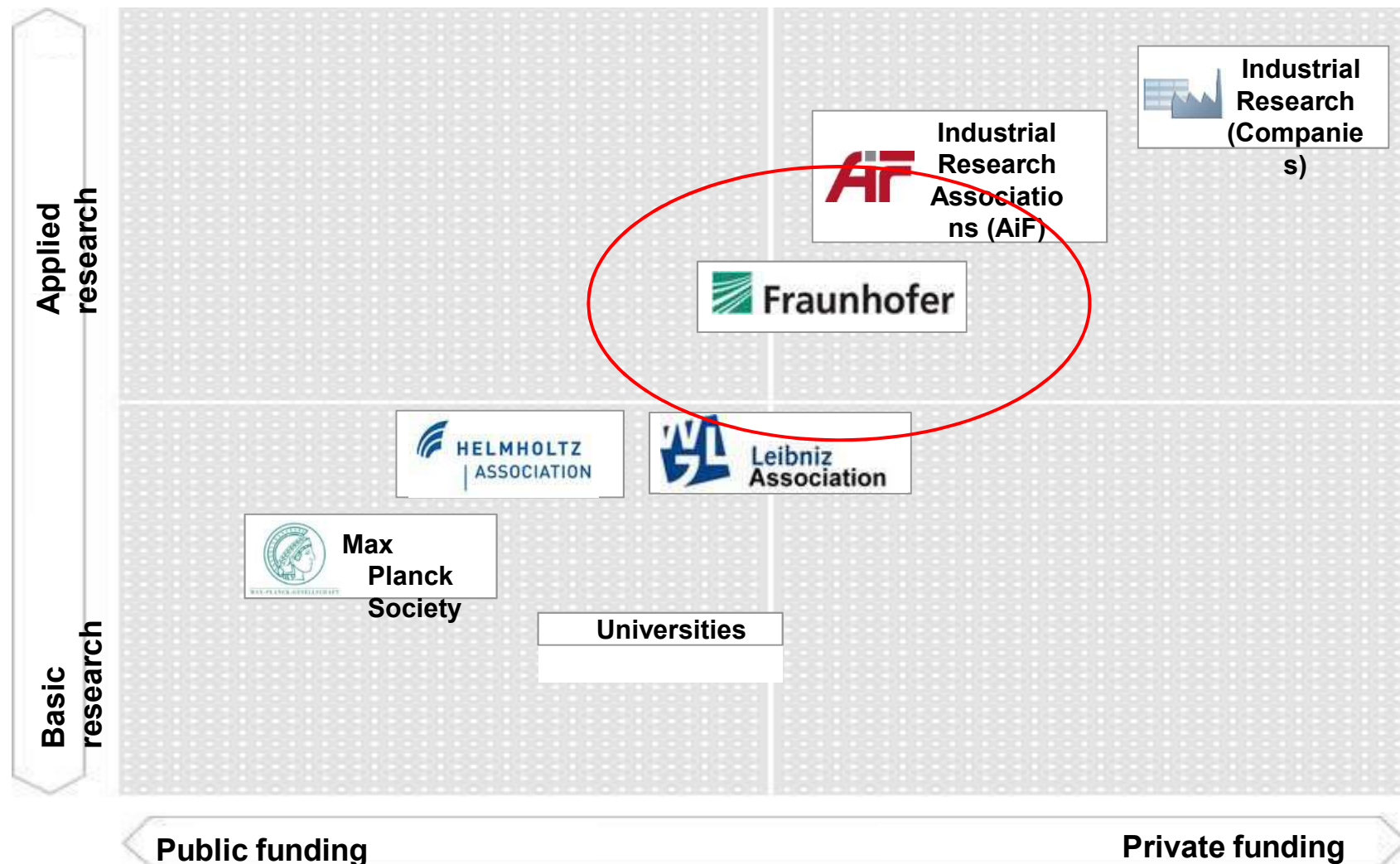


transfers basic innovations to the **application stage** and creates **prototypical solutions**.



implements application-ready solutions in the **economy**.

German Research Landscape



Source: According to BMBF Germany (simplified)

Fraunhofer-Gesellschaft Worldwide



Fraunhofer Groups



Innovation Research

IAO, IMW, INT, IRB, ISI



Microelectronics

EMFT, ENAS, FHR, HHI, IAF, IIS, IISB, IMS, IPMS, ISIT, IZM
Guests: AISEC, ESK, FOKUS, IDMT, IKTS, IMWS, IZFP



Information and Communication Technology

AISEC, ESK, FIT, FKIE, FOKUS, IAIS, IDMT, IESE, IGD, IOSB, ISST, ITWM, IVI, MEVIS, SCAI, SIT

Guests: HHI, IIS, IAO



Production

IAPT, IEM, IFF, IGCV, IGP, IML, IPA, IPK, IPT, IWU, UMSICHT



Life Sciences

EMB, IBMT, IGB, IME, ITEM, IVV, IZI



Defense and Security

EMI, FHR, FKIE, IAF, ICT, INT, IOSB
Guests : HHI, IIS, ISI



Light & Surfaces

FEP, ILT, IOF, IPM, IST, IWS



Materials and Components – MATERIALS

EMI, IAP, IBP, ICT, IEE, IFAM, IKTS, IMM, IMWS, ISC, ISE, IWES, IWM, IZFP, LBF, WKI
Guests: IGB, IIS, ISI, ITWM

Fraunhofer Alliances

Pooling expertise

The Fraunhofer Alliances facilitate customer access to the services and research results of the Fraunhofer-Gesellschaft. Common points of contact for groups of institutes active in related fields provide expert advice on complex issues and coordinate the development of appropriate solutions.



Adaptronics



Additive Manufacturing



AdvanCer



Ambient Assisted Living



AutoMOBILE Production



Battery



Big Data



Building Innovation



Cleaning Technology



Cloud Computing



Digital Media



Embedded Systems



Energy



Food Chain Management



Lightweight Structures



Nanotechnology



Photocatalysis



Polymer Surfaces



Simulation



Space



Technical Textiles



Traffic and Transportation



Vision



Water Systems (SysWasser)

Fraunhofer Subsidiary and Center and Fraunhofer Project Center in South America

- Fundación Fraunhofer Chile Research
- Fraunhofer Center for Systems Biotechnology

■ Fraunhofer Project Centers

- Fraunhofer Project Center for Innovations in Food and Bioresources at ITAL
- Fraunhofer Project Center for Software and Systems Engineering at UFBA
- Fraunhofer Project Center for Innovations in Advanced Manufacturing at ITA

- Fraunhofer Liaison Office Brazil (SP)



Fraunhofer in Brazil

Official website: <http://www.brazil.fraunhofer.com/>



Workshop: Sistemas de Energias Sustentáveis

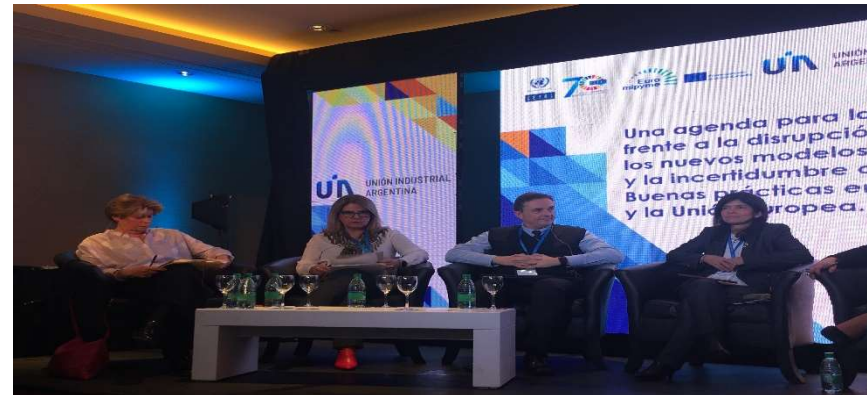
Realização – Instituto Fraunhofer de Tecnologia Química e Fraunhofer Liaison Office Brazil

Segunda-feira, 01 de abril de 2019 – Horário das 08h00 às 13h30min

Local: Rua Verbo Divino, 1488 – 3º andar – Chácara Santo Antônio – São Paulo – SP

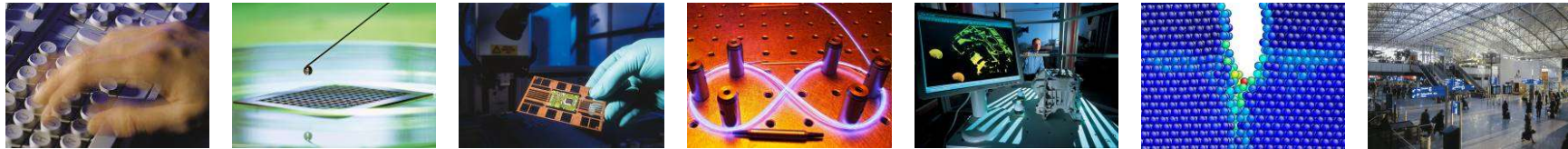
Programação Preliminar

08:30 – 09:00	Credenciamento
09:00 – 09:30	Abertura e Contexto - Ronald Dauscha - Diretor do Fraunhofer Liaison Office Brazil - Prof. Edson Antonio Ticianelli – Professor do Instituto de Química de São Carlos (a confirmar)
09:30 – 10:30	O Caminho para a Eficiência e Sustentabilidade - Antônio Camargo – Solar Tech Inenergy - STI - Dra. Ana Salles – Especialista do Departamento de Engenharia Ambiental do Instituto Fraunhofer de Tecnologia Química - ICT - Ricardo Andrade – Assessor da Diretoria de Inovação do Instituto de Pesquisas Tecnológicas - IPT
10:30 – 11:00	Coffee break
11:00 – 12:00	Iniciativas de Fomento - Douglas Zampieri – Coordenador da Fundação de Amparo à Pesquisa - FAPESP - Dra. Katrin Winkler – Diretora da Sociedade Alemã de Amparo à Pesquisa - DFG - José Luis Gordon – Diretor de Planejamento e Gestão da EMBRAPA (a confirmar)
12:00 – 13:00	Casos Práticos - Dra. Ana Salles – Especialista do Departamento de Engenharia Ambiental do Instituto Fraunhofer de Tecnologia Química - ICT - Dr. Filipe Cassapo – Diretor do Instituto Senai de Inovação em Eletroquímica - Gerhard Ett – CTO da empresa Eletrocell



Fraunhofer Liaison Office Brazil

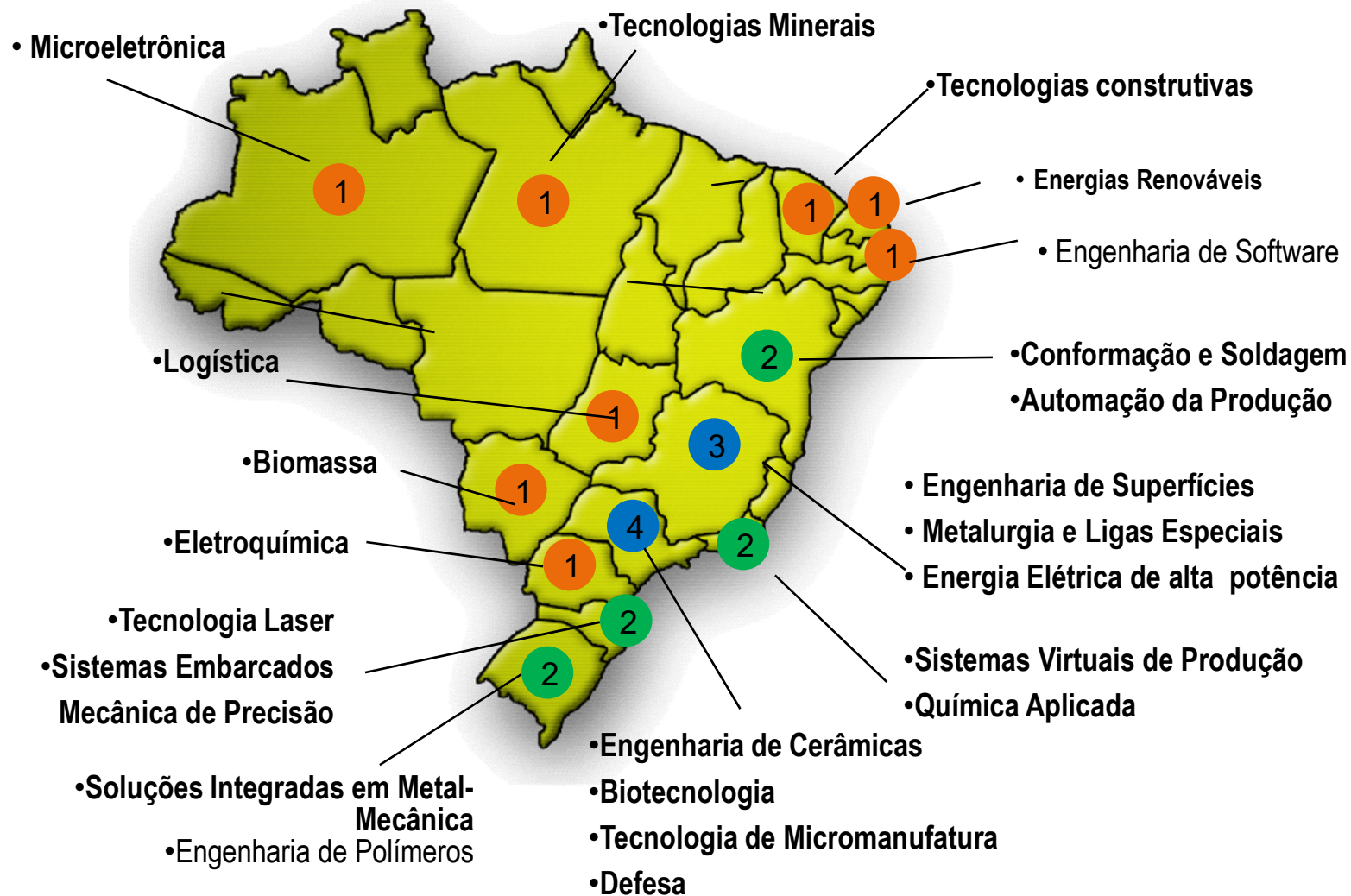
Strategic Cooperation



- EMBRAPPII - The Brazilian Agency for Industrial Research and Innovation
 - Scientific and Technological Cooperation
- SENAI-CNI-Innovation Laboratories
 - Establishment and structuring of Innovation Laboratories
 - Elaboration of business and management plans
 - Consulting

- FAPESP – São Paulo Research Foundation
 - Scientific and Technological Cooperation
- MCTIC-CNPq
 - Matchmaking for:
 - “Ciências sem fronteiras” Program
 - PhD students and PhD

Institutos Senai de Inovação



Fraunhofer & Brazil

General Collaboration

Brazil-Fraunhofer colaboration since 50 years

Fraunhofer Liaison Office Brazil since 2012

- Fraunhofer Project Center for Innovations in **Food and Bioresources** at ITAL
- Fraunhofer Project Center for **SW and Systems Engineering** at UFBA
- Fraunhofer Project Center for Innovations in **Advanced Manufacturing** at ITA

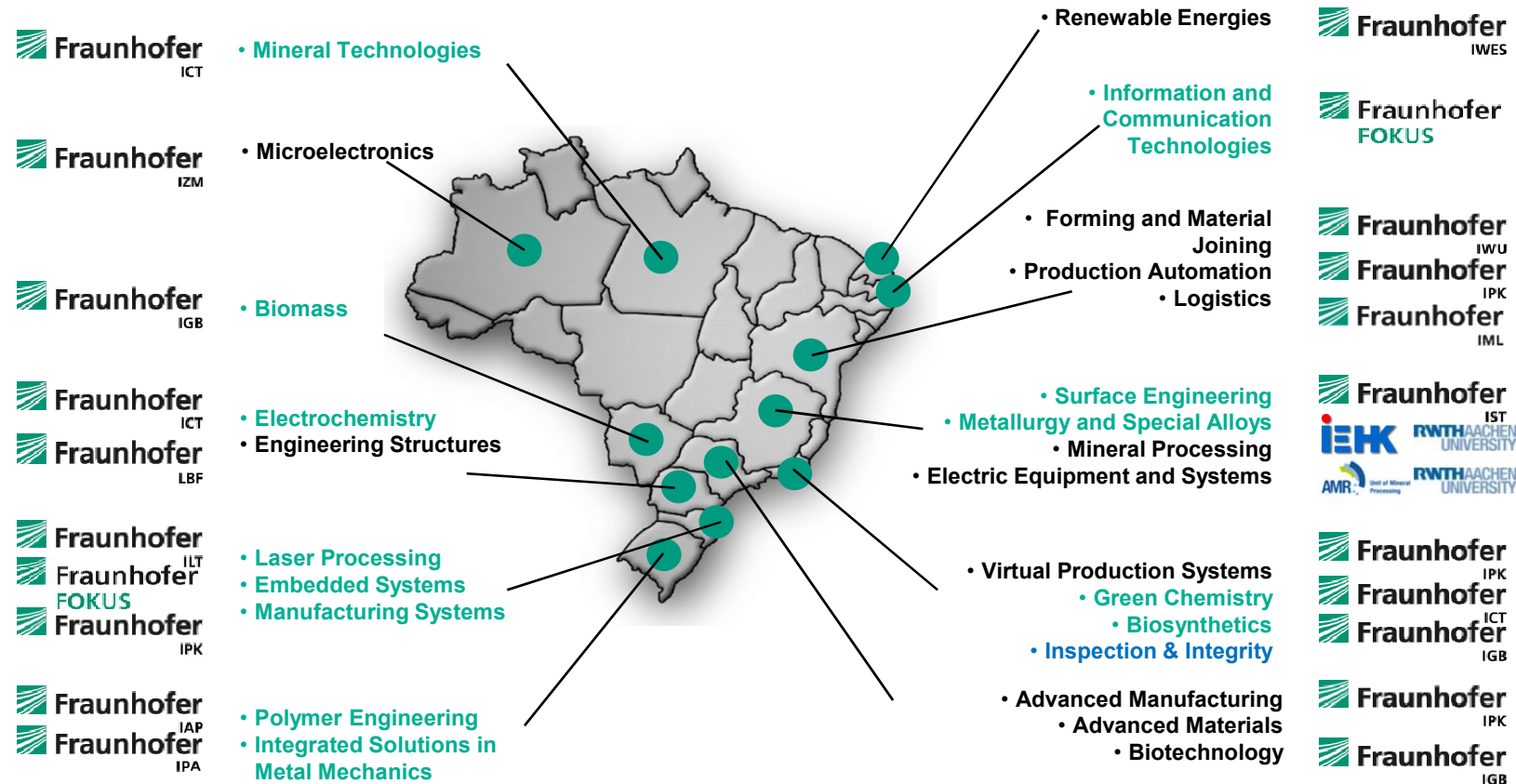
Several Fraunhofer-Institutes have project and cooperation with Brazilian Companies

Special demands:

- Production technologies
- Renewable Energies & Bioeconomy
- Materials
- Biotechnology
- Aerospace
- Industrial Infrastructure

Overview of the ISI Network & Fraunhofer Technology Experts

Thirteen Executed Technology Audits in 2017 & 2018



Legend:

- ISIs with Technology Audits in 2017 & 2018
- New ISIs in planning



Fraunhofer Project Center for Innovation in Advanced Manufacturing at ITA (Technological Institute of Aeronautics) FPC@ITA

Strategic Objectives

- Support the **scientific, technological and economic development** in Brazil
- **Support the Brazilian** industry with applied research and innovation projects
- Acquiring and execute joint RD&I projects with industry in Brazil, in cooperation **with ITA and the SENAI Innovation Institutes in Santa Catarina**
- Focus on **Advanced Manufacturing** or **Industrie 4.0** solutions

Partners /Contact Persons

- ITA : Prof. Dr. Anderson Borille
- Fraunhofer IPK: Dr. -Ing. David Carlos Domingos

Project framework

- Duration of the Fraunhofer Project Center: 3 years
- Financing in Germany: Fraunhofer Headquarters and Fraunhofer IPK (**€ 1 million**) - Staff costs, travel costs and marketing costs
- Financing in Brazil: ITA (**approx. € 1 million**) - Staff costs, infrastructure and equipment



National Brazilian Market Analysis

Concentration of industries



50 % of Brazilian industry

70 % of German companies in Brazil

Fraunhofer IPK

Production Technology Center in Berlin (PTZ Berlin)



picture: © Fraunhofer IPK

Corporate & Quality Management

Methods and Tools for the planning, control and execution of Business Processes

Efficient and interdisciplinary future-oriented Q-methods to improve Competitiveness



IPK Industrie 4.0 Suitcase



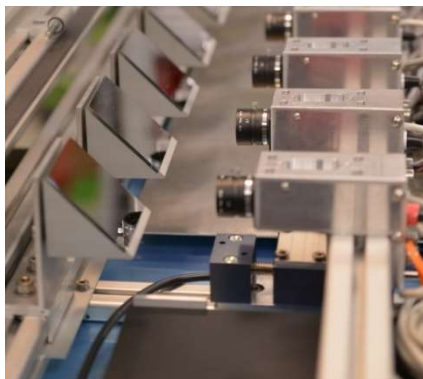
Modular MES and
IPK Management Cockpit

- Development of fast *Industrie 4.0* – Prototypes especially for SMEs
- Technology-oriented planning of *Industrie 4.0* Factories
- *Industrie 4.0* Metamorphoses with modular MES and Industry 4.0 Management Cockpits
- Model-based Company Development / Process Management
- Digitization of Business Processes and Introduction of holistic Production Systems
- Development of National Innovation Systems and Innovation Centers
- Best Practice Benchmarking and Corporate Knowledge Management
- Design of Global Quality Processes, Systems and Organizational Structures
- Implementation of Quality 4.0 and Data Quality Management
- Entrepreneurship and Intrapreneurship (Open Lab)

© Foto: Fraunhofer IPK/Gerold Baumhauer

Automation Technology

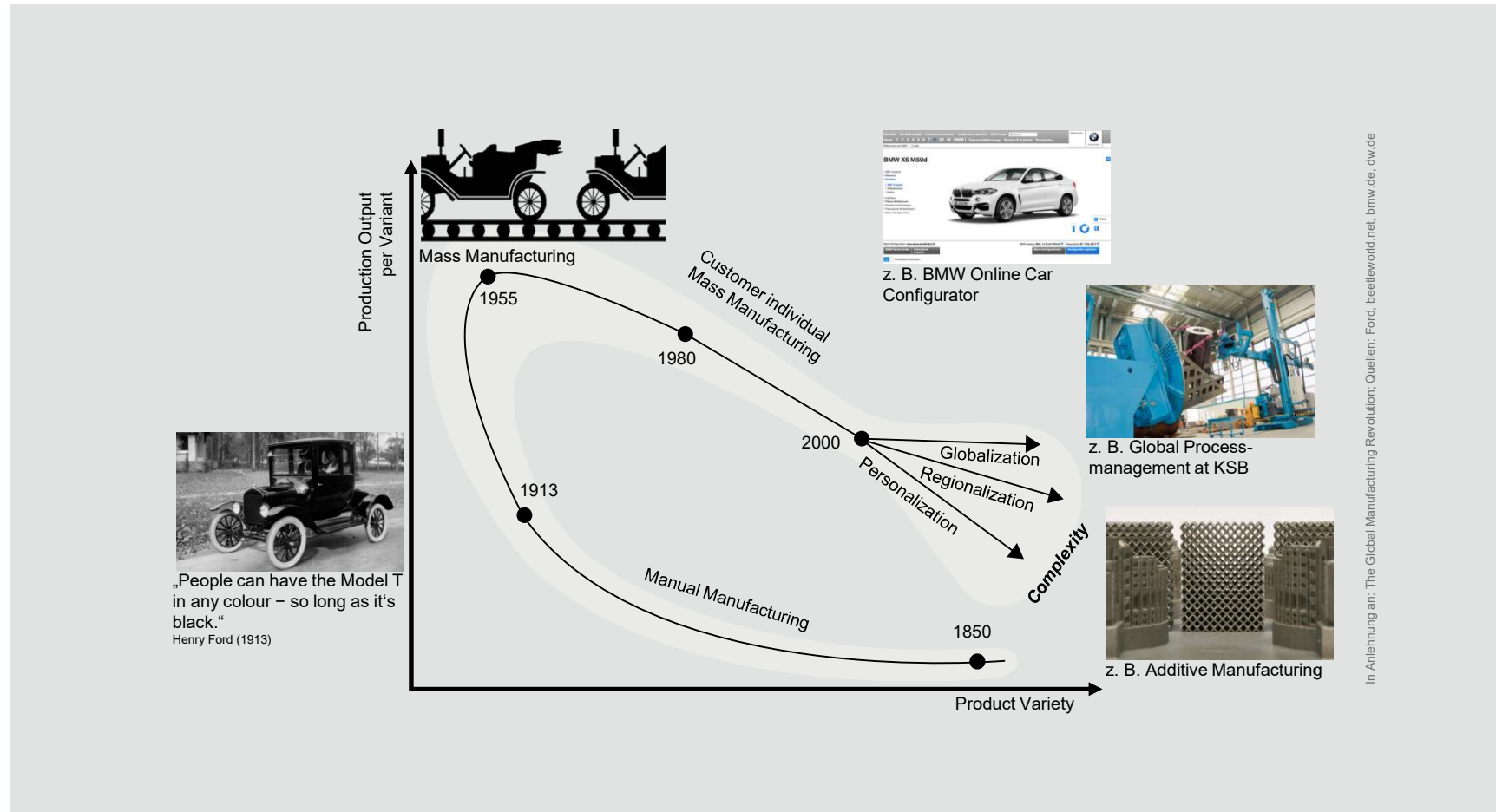
Efficient and highly flexible automation of plants and processes with robots, handling devices and machine vision



- Development of automation concepts and innovative robotic and handling systems
- Solutions for the efficient collaboration of humans and robots: Collaborative robots (COBOTs), wearable robotics, ergonomics
- Development of intelligent robot control systems and kinematics
- Innovative ICT structures for cloud and services based automation ("Automation as a Service")
- Smart data analysis for efficient production
- Machine vision for applications in the fields of production and logistics
 - Machine learning and visImage processing and pattern recognition for automated optical inspection of surface, shape and colour
 - Machine learning and visualization for statistical process control
 - Development and integration of opto-mechatronic measurement system prototypes, large volume metrology

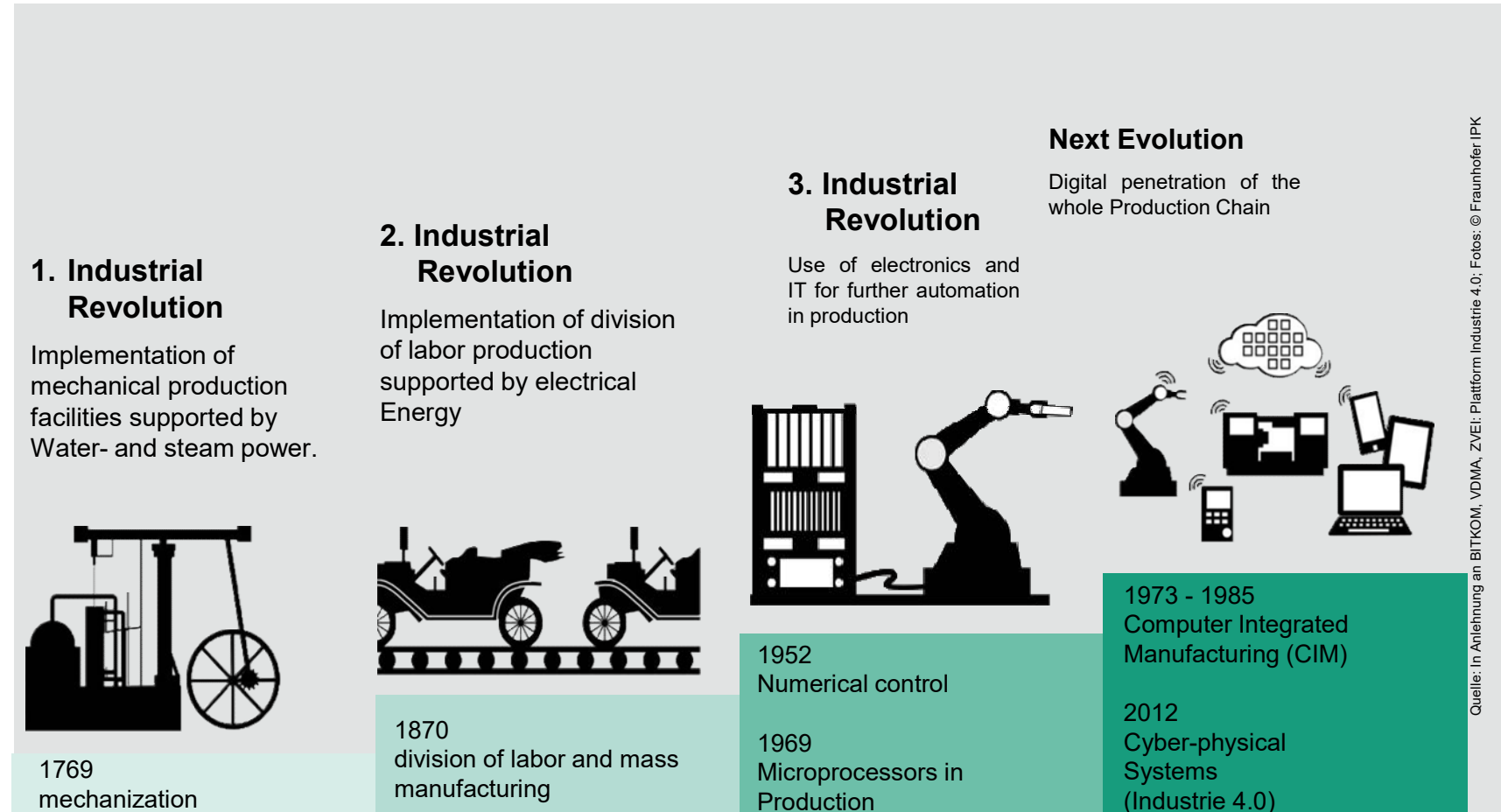
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Increasing Complexity lead to new value chains



Digital integrated, intelligent Production

Industry 4.0 – The 4th Industrial Revolution?



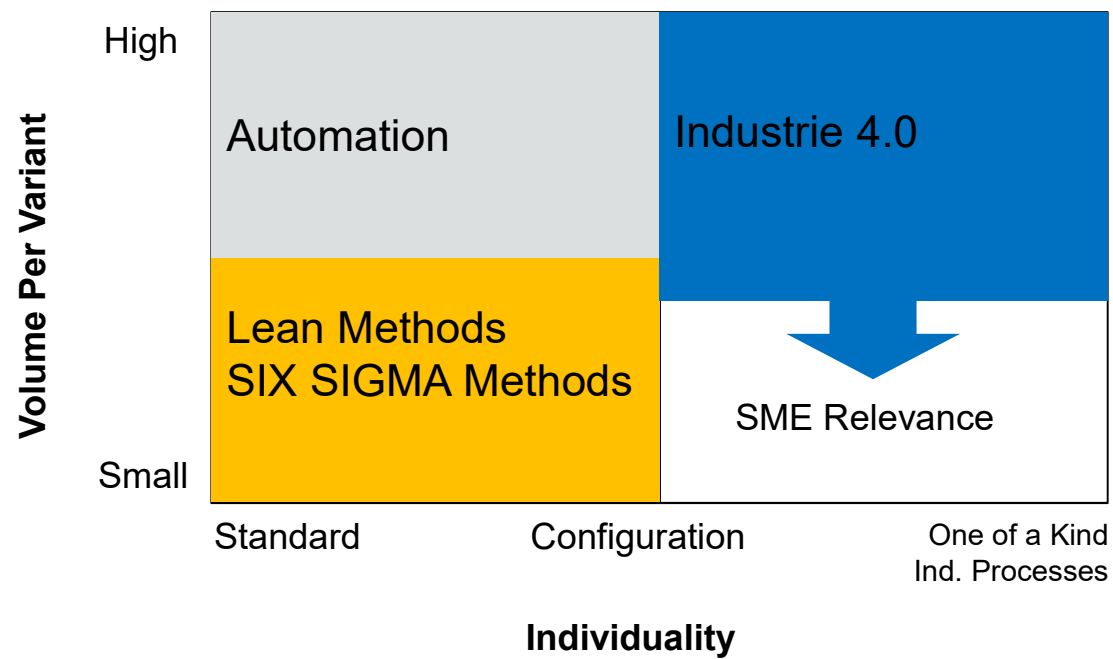
DIGITAL TRANSFORMATION

INDUSTRIE 4.0 – DEFINITION

Basic idea and approach of Industrie 4.0:

- **Implementation and use of internet of people, things, services and processes**
in industry, in manufacturing companies
- **Ubiquitous, surrounding networking, assistance and intelligence**
people, machines, objects, IT-systems
- **Approach:**
 - **Horizontal integration** in value added networks
 - **Vertical integration** of production and IT-systems
 - Digital **consistency in engineering**
 - **Decentralization** of intelligence and functions
 - **Sociotechnical system design**

Application for Industrie 4.0 Solutions



Other Fraunhofer Institutes for Lean



Fraunhofer Institute for Manufacturing Engineering and Automation IPA

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[Homepage](#) [Expertise](#) [Order management and value networks](#) [Lean Management](#)

Lean Management



Contact

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Lean Indirekt

Most of the bottlenecks affecting throughput times are found in value streams in indirect company areas. Fraunhofer IPA helps you identify these bottlenecks and improve effectiveness and efficiency in your office and administration areas.



Lean Lab

Today, for many companies and research facilities, efficiency in the laboratory is a key success factor. Fraunhofer IPA develops lean concepts to realize shorter throughput times, better quality and lower costs.

Lean Warehousing

Warehouses are an important part of any supply chain but they are often costly in terms of money and time because the processes in and around the warehouses constantly need to be optimised. In addition to this, volatile markets and shorter and shorter contract lengths are increasing the demands on logistics. Everyone wants concepts that are efficient and sustainable.

For decades now, German manufacturing companies have been practicing lean manufacturing – an approach that Toyota originated. This approach can also be used in the warehouse: the use of lean methods and tools within intralogistics supports the continuous improvement process and helps make the processes in the warehouse more efficient.

The Fraunhofer Institute for Material Flow and Logistics IML team will help you every step of the way when you implement this process. We make it possible for you to optimize the performance, quality, and costs of your warehouse and take a significant step towards ensuring the long-term competitiveness and success of your company.



Fraunhofer Institute for Material Flow and Logistics

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Fraunhofer Project Center for Software Systems and Engineering at UFBA – FPC@UFBA

Strategic Objectives

- Support the **scientific, technological and economic development** in Brazil
- **Support the Brazilian** industry with applied research and innovation projects
- Acquiring and execute joint RD&I projects with industry in Brazil, in cooperation **with UFBA**
- Focus on **Critical Systems, Data Analytics and Information Visualization, or eGovernment**

Partners / Contact Persons

- Federal university of Bahia– UFBA: Ph.D. Mendonça
- Fraunhofer IESE: Dr. Karina Barreto Villela

Projects

- **Rescure** - new communication platform to save lives
- **Automind** - Simulator for Subsalt platforms Performance Studies
- **Software Reuse Methodology for oil and gas production and exploration control**



Fraunhofer in Brazil

Projects and Cooperation



Fraunhofer ENAS

- Cooperation with Superintendência da Zona Franca de Manaus (Suframa) and Fraunhofer Institute for Electronic Nano Systems (ENAS)

Fraunhofer IVV

- Integrated process for sunflower oil and protein in collaboration with Brazilian industry
- SeaFeed - Bioeconomics Project to study applications for marine macroalgae

Fraunhofer in Brazil

Projects and Cooperation



Fraunhofer IPK

- Implementation of new manufacturing technologies in the water turbine sector, Planning and Implementation of 26 Innovation Institutes (SENAI)
- Intellectual Capital Statement project in cooperation with the university PUC, SEBRAE (Agency to support SMEs) und 10 medium-sized companies
- CEBRABIC - CENTRE FOR EUROPE-BRAZIL BUSINESS AND INNOVATION COOPERATION. (Consortium is coordinated by Fraunhofer IPK)



Ronald Dauscha

R. M. Dauscha:

- Electrical / Electronic Engineer Degree from Escola Politécnica (POLI) of Universidade de São Paulo (USP)
- MBA in Industrial Administration from Universidade Federal do Paraná (UFPR)
- MBA in Entrepreneurial Finances from Fundação Getúlio Vargas (FGV)
- MBA in Innovation and Technology Management from UNICAMP
- Trained and Certified by IBGC (Brazilian Institute for Corporate Governance) as Member of Board Councils
- 30 years at Siemens; last 5 years: Director of Strategy & Innovation & Regulatory Affairs of the Group in Brazil
- Former CEO of SHC Gigaset / Siemens Group Brazil (with local R&D)
- Former Sales Director for Telmex in Argentina, Brazil and Chile of Nokia Siemens Network
- Other managing responsibilities at Siemens: R&D, Production, Field Service and Sales
- Current Head of the Liaison Office in Brazil of the Fraunhofer Research Institutes Organization (Germany)
- Currently one of the Coordinators at FAPESP (Research Foundation of the SP State) for Innovation Lines (PIPE, PITE, 4.0)
- Consultant for CITS (International Center of Software Technologies)
- Partner of the StartUp InnovaSkills: Platform 4.0 for HR Open Follow-up and Enabling
- CEO of the Linkeo Consulting Group
- Current Member of CONIC and DECOMTEC (Competitiveness, Technology and Innovation Councils) of FIESP
- Current Member of MEI (Business Innovation Front) of the National Industry Confederation - CNI
- Ad-hoc FGV teacher in postgraduate courses (Entrepreneurship, Innovation, Production, Services and Administration)
- Former CEO of CLAEQ (Center for Advanced Lines in Innovation, Excellence and Quality)
- Founder and CEO of C2i (International Innovation Center) of the Industry Federation of Paraná – FIEP
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- Former Advisor of EMBRAPAII (Network of Industry Applied Research Centers of the Brazilian government)



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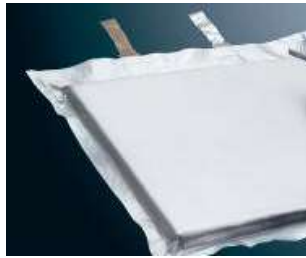
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V Fórum Discuta Lean

Muito obrigado!!!

Fraunhofer in Brazil
Research Dedicated to the Future



Ronald Dauscha
Head of Fraunhofer Liaison Office Brazil

