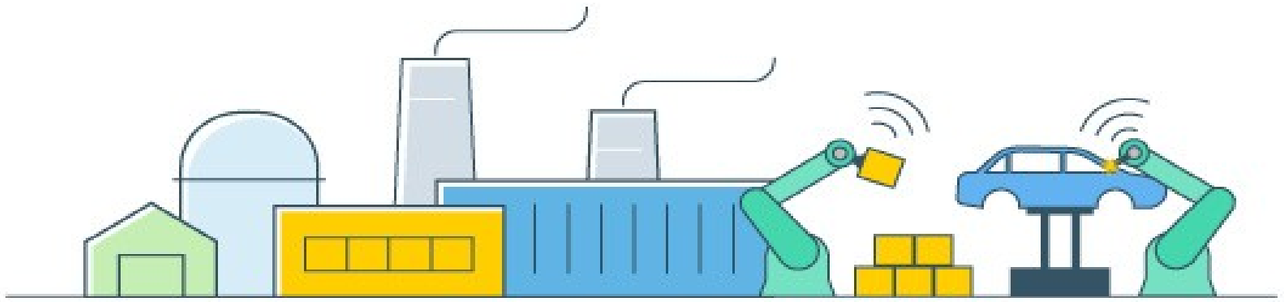
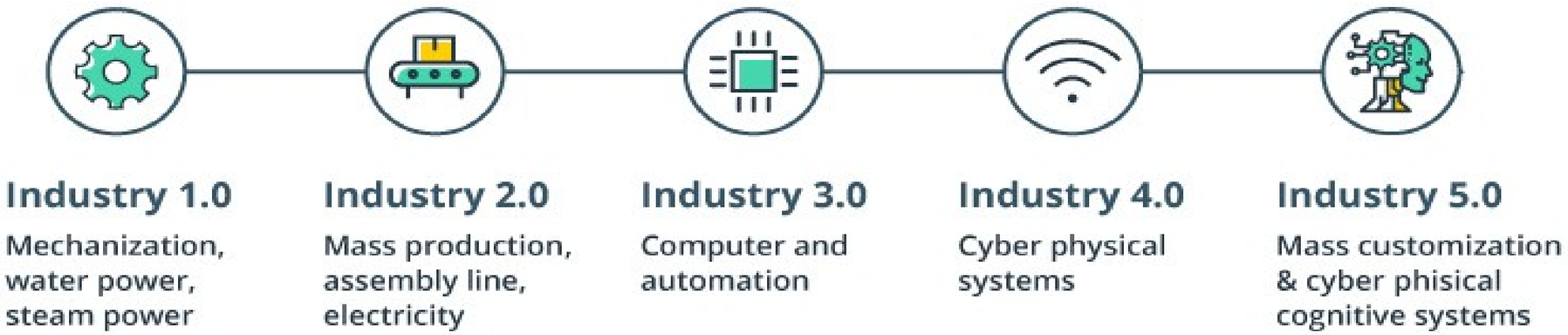
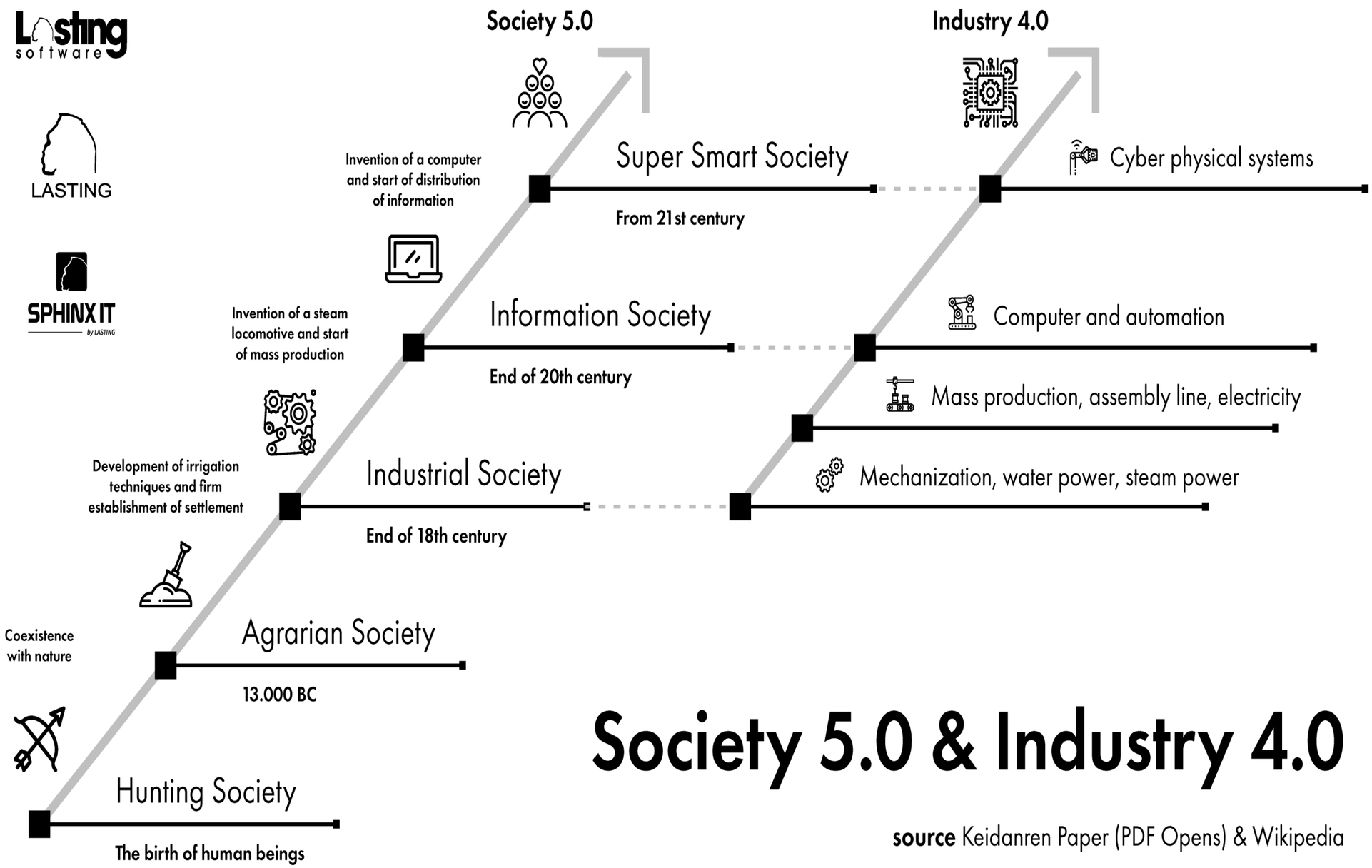
Technology Upgrade from 4.0 to 5.0

Material Colection with different interpretions





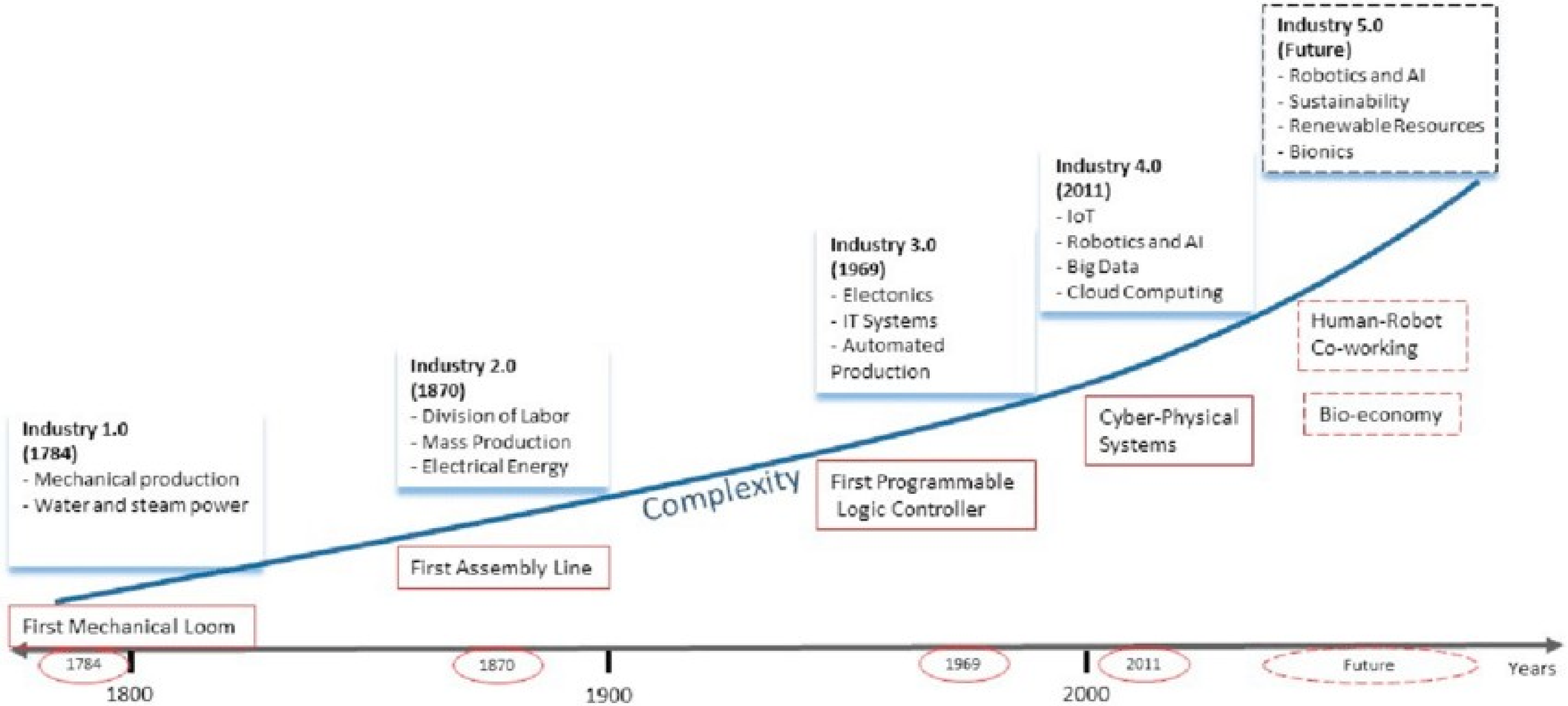
							Modern Digitale Standards	Industry 4.0 to Industry 5.0		Dokumententitel: **RP**
										Dokument Page: 1



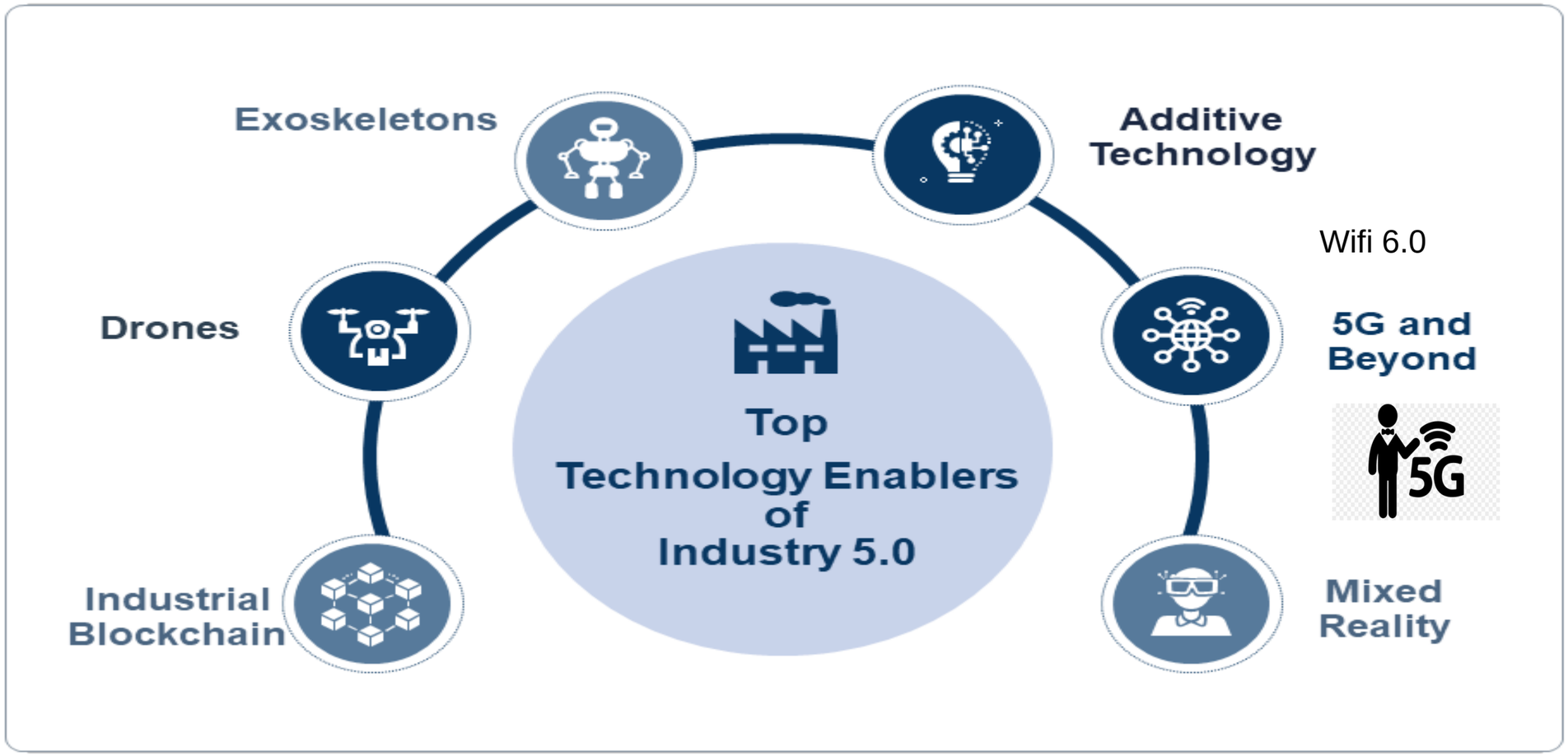
Society 5.0 & Industry 4.0

source Keidanren Paper (PDF Opens) & Wikipedia

							Modern Digitale Standards	Industry 4.0 to Industry 5.0		Dokumententitel: **RP**
										Dokument Page: 2


Industry 5.0
(Future)
- Robotics and AI
- Sustainability
- Renewable Resources
- Bionics
Industry 4.0
(2011)
- IoT
- Robotics and AI
- Big Data
- Cloud Computing
Industry 3.0
(1969)
- Electonics
- IT Systems
- Automated Production
Industry 2.0
(1870)
- Division of Labor
- Mass Production
- Electrical Energy
Industry 1.0
(1784)
- Mechanical production
- Water and steam power
Human-Robot Co-working
Bio-economy
Cyber-Physical Systems
Complexity
First Programmable Logic Controller
First Assembly Line
First Mechanical Loom
1784
1870
1969
2011
Future
Years
1800
1900
2000

Technology enablers of Industry 5.0

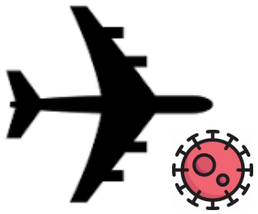


FROST & SULLIVAN

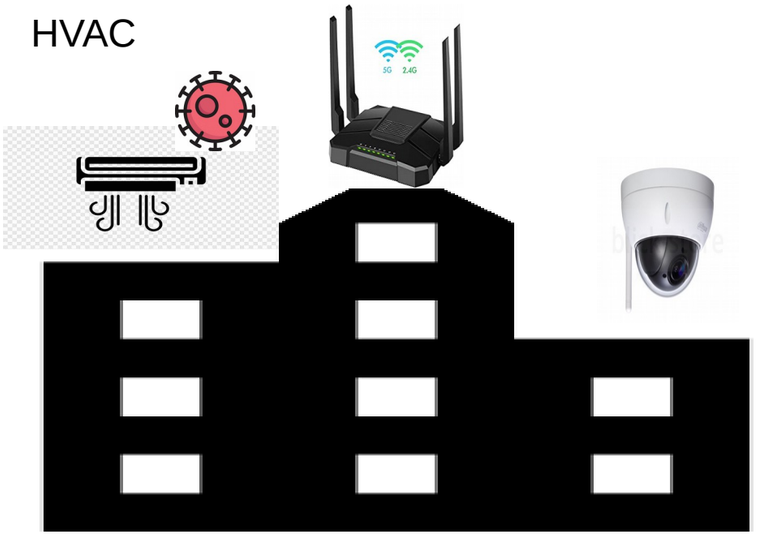
Note: Also need Wifi 6 for building

Public Health Monitoring (PSM) And Tracking Tools (TT)

ETS

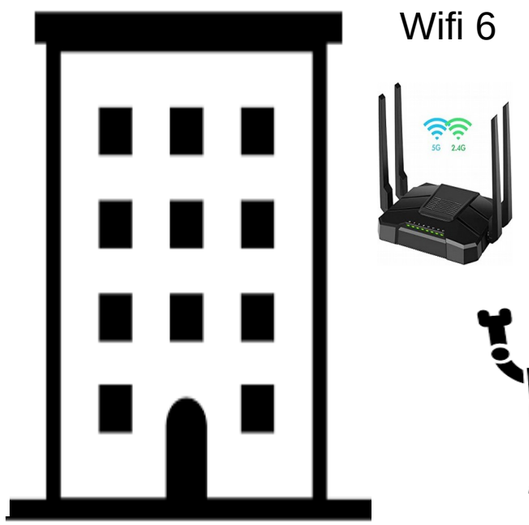


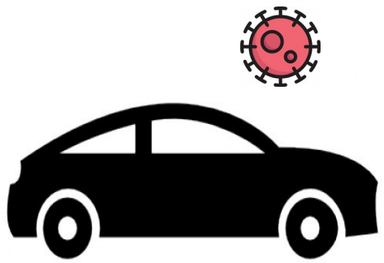
HVAC

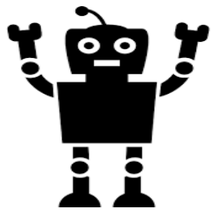


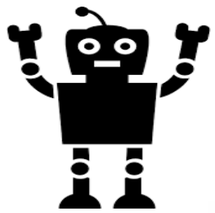
Temperature
CCTV

Wifi 6









Fever Robots

Cleaning Robots

PEPP-PT

National Health System NHS

Wuhan has
changed the world

Version		Topic	Date	Name		
1		Entwurf	10.5.2020	Prüfling		Dialectial Interim Bureaux
2		Blue tooth TT				

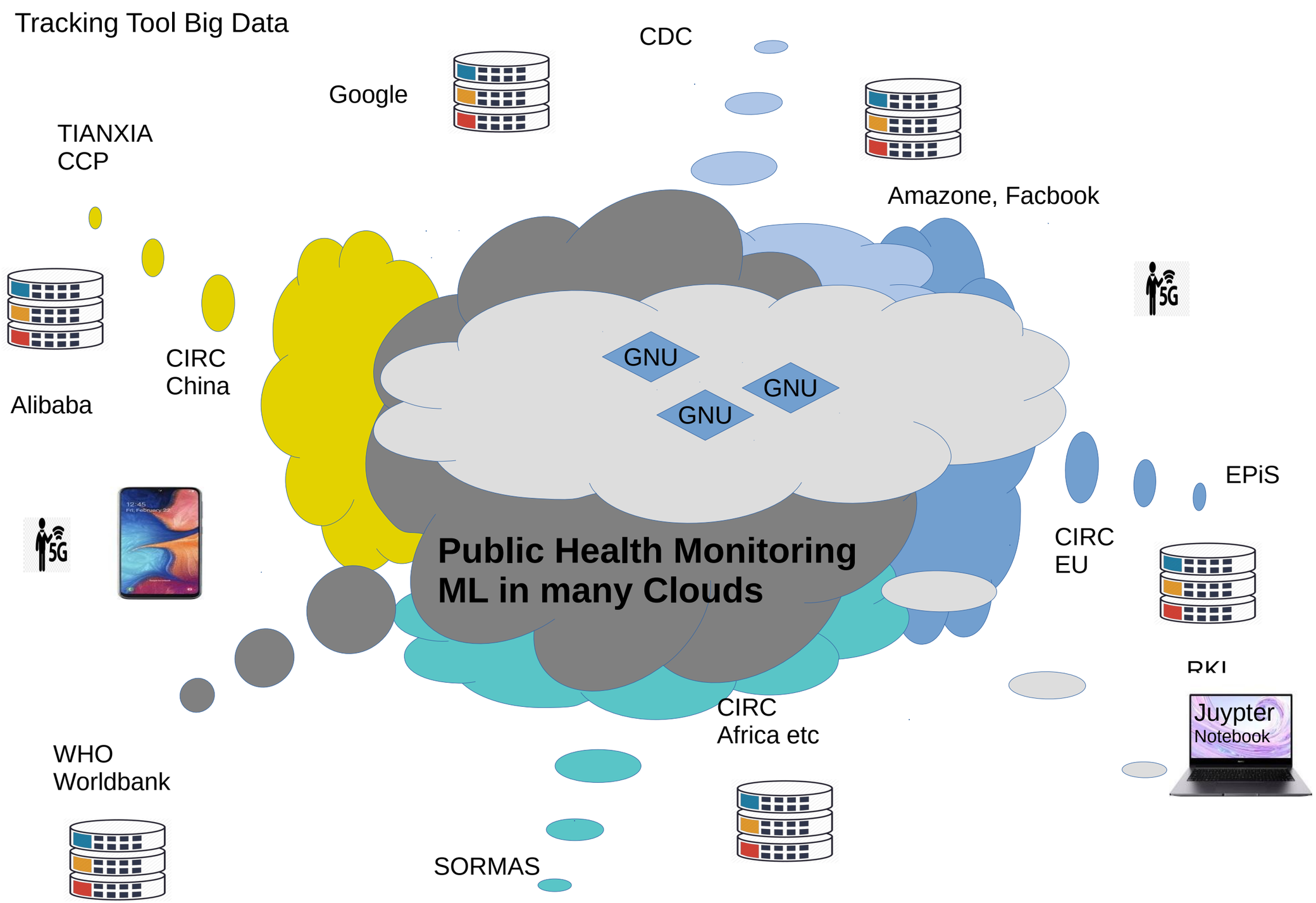
Ingenieurs Büro
Dialectial Interim

Zorneding

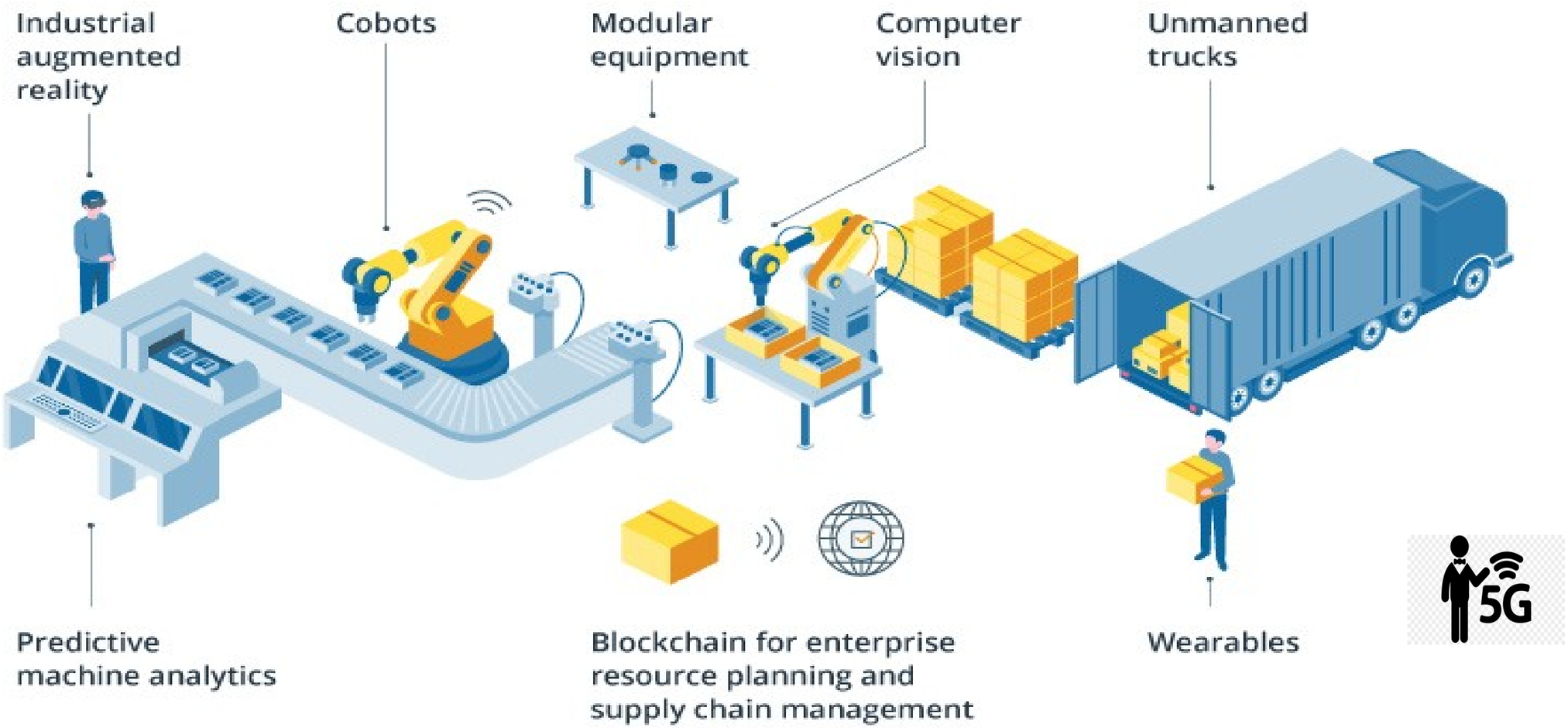
IT Technology

Dokumententitel: **RP**

Dokument Page: 6



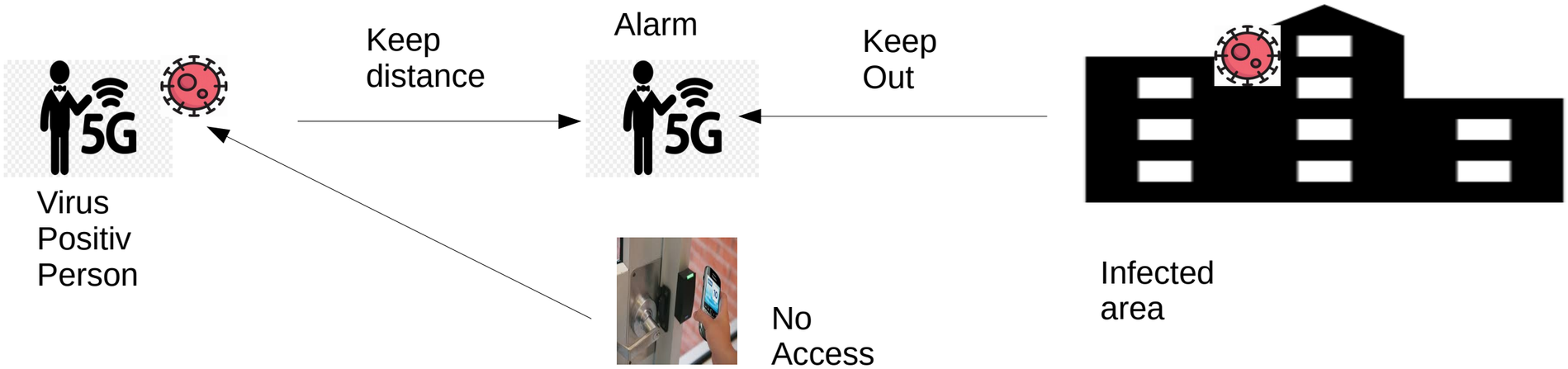
							Historie von Digitalen Standards	2020 Hygene Technology		Dokumententitel: **RP**
										Dokument Page: 7


Industrial augmented reality
Cobots
Modular equipment
Computer vision
Unmanned trucks
Predictive machine analytics
Blockchain for enterprise resource planning and supply chain management
Wearables
5G

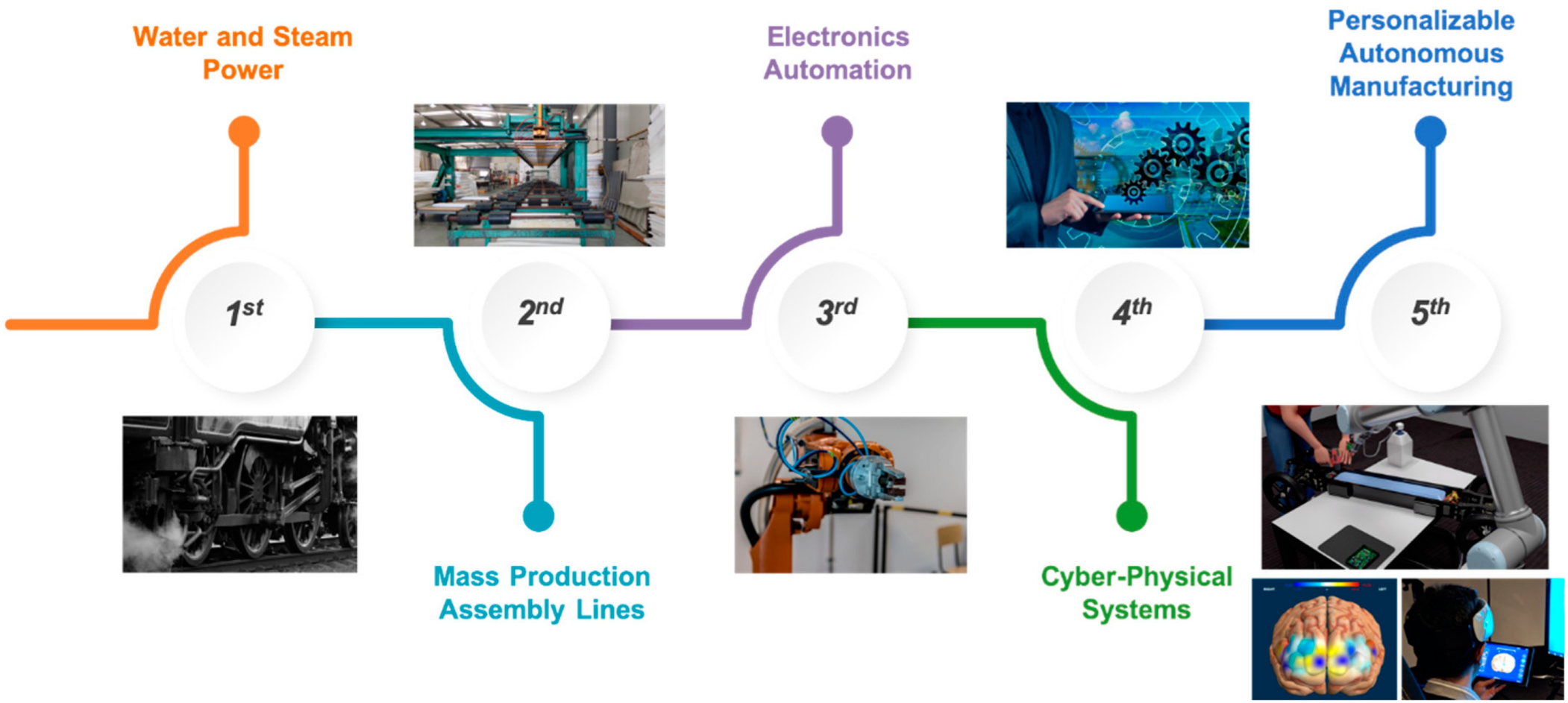
New Public Hygene Technology and European Tracking Systems are available soon

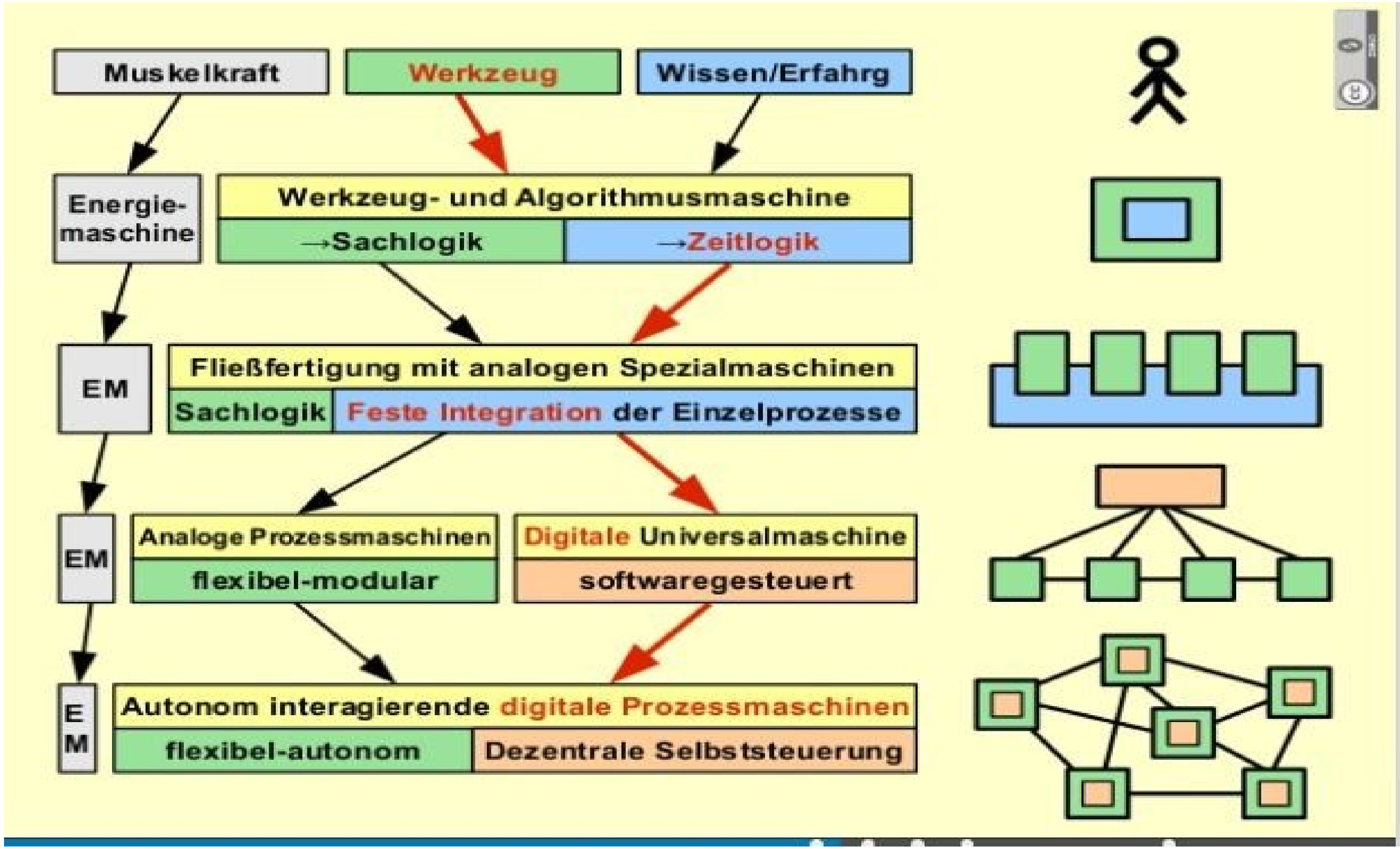
User Layer	Smartphone Apps	Infection Status Verification Service	Proximity Warning Service
Epidemiological Framework Layer	National Health Policy Framework	Pandemic Management Planning Framework	Epidemiological Validation Frameworks
Epidemiological Management and Federation Layer	Operational Pandemic Management Backbone	Planning Pandemic Management Backbone	Inter-country Federation Service
Protocol and Measurement Layer	Data Protection Protocol	Secure Communication Protocol	Proximity Measurement

PEPP -PT Block Diagram



EPiS Scenario

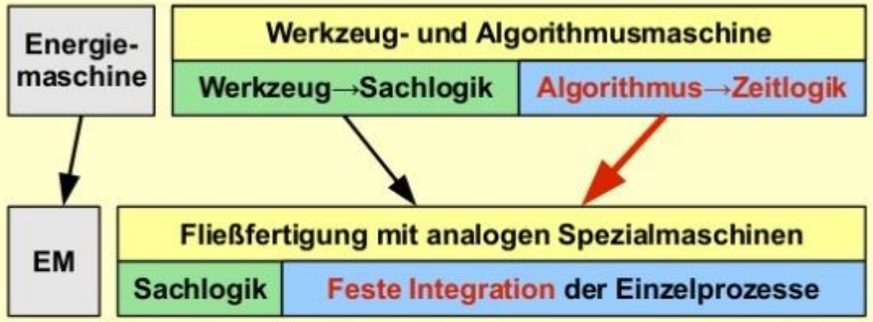

Water and Steam Power
1st
Mass Production Assembly Lines
2nd
Electronics Automation
3rd
Cyber-Physical Systems
4th
Personalizable Autonomous Manufacturing
5th


Muskelkraft
Werkzeug
Wissen/Erfahrg
Energie-
maschine
Werkzeug- und Algorithmusmaschine
→Sachlogik
→Zeitlogik
EM
Fließfertigung mit analogen Spezialmaschinen
Sachlogik
Feste Integration der Einzelprozesse
EM
Analoge Prozessmaschinen
flexibel-modular
Digitale Universalmaschine
softwaregesteuert
E
M
Autonom interagierende digitale Prozessmaschinen
flexibel-autonom
Dezentrale Selbststeuerung

Industrie 1.0: „Industrielle Revolution“

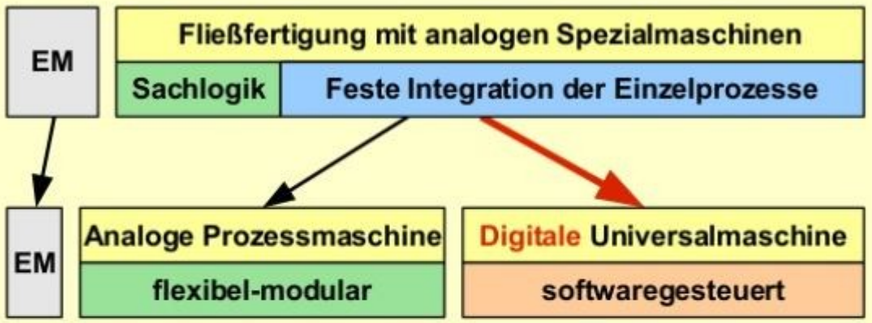
- Transformation: Handwerk → Manufaktur → Industrie
- Die »enge technische Basis [der Manufaktur] schließt wirklich wissenschaftliche Analyse des Produktionsprozesses aus, da jeder Teilprozeß ... als handwerksmäßige Teilarbeit ausführbar sein muß« (358)
- Übergang von der formellen zur reellen Subsumtion
- Übergang von der personalen zur sachlichen Herrschaft

Industrie 2.0: „Fordismus/Taylorismus“



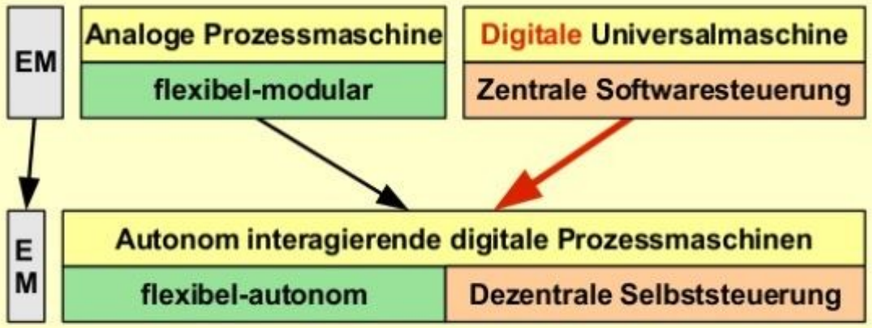
- Transformation: Inselfertigung → analoge Fließfertigung
- Erste algorithmische Revolution: Der »ideale« Prozess
- Reelle Subsumtion: Arbeiter*in als Anhängsel der Maschine

Industrie 3.0: „Toyotismus/KVP/JIT“



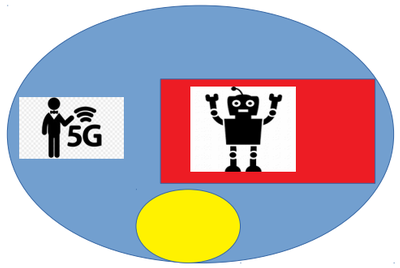
- Transformation: Fließfertigung → digital integrierte Fertigung (CIM: »Computer Integrated Manufacturing«)
- Zweite algorithmische Revolution: Der »flexible« Prozess
- Reelle Subsumtion: Unterordnung des ganzen Menschen

Industrie 4.0: „Vernetzte Agenten-Produktion“

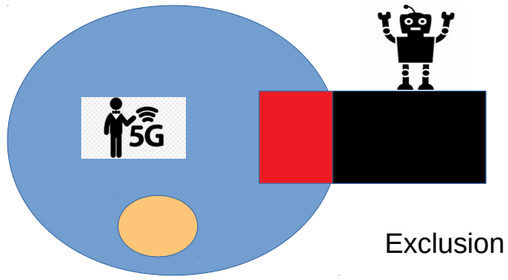


- Transformation: Zentral gesteuerte Fertigung → Agenten-basierte Netzwerk-Fertigung
- Dritte algorithmische Revolution: Der »autonome« Prozess
- Reelle Subsumtion: ... darauf komme ich gleich zurück!

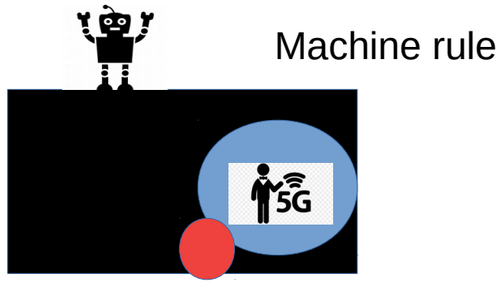
Human Machine Symbiosis #1 with intersection and responsability coverage Gerg Klaus
Human is communicating by 5G with XML-Files



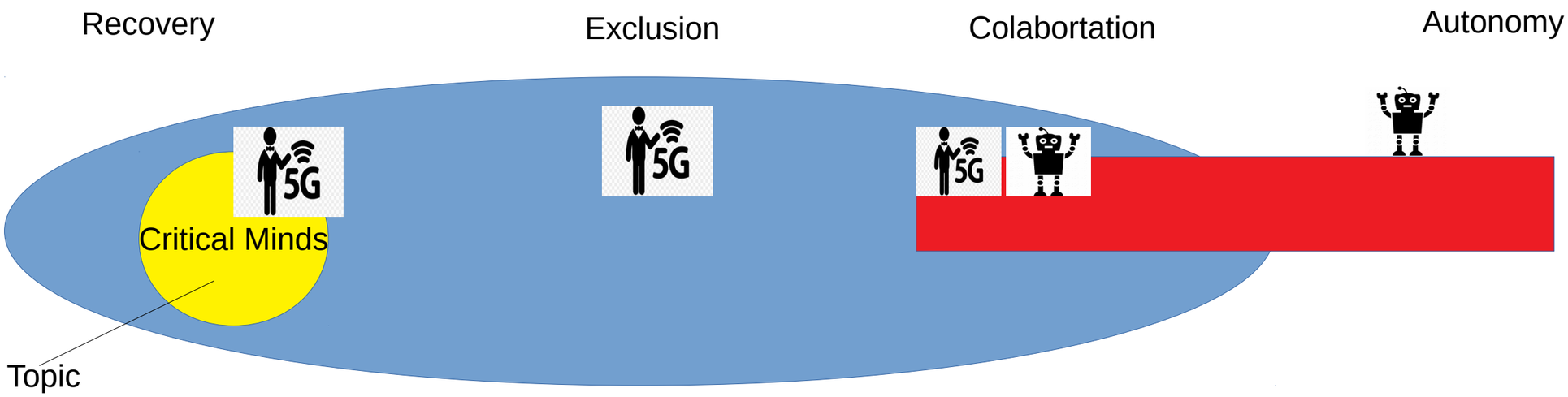
#1 Machine as a work tool set
Full coverage



#2 Maschine as mind tool set
Partly Black box

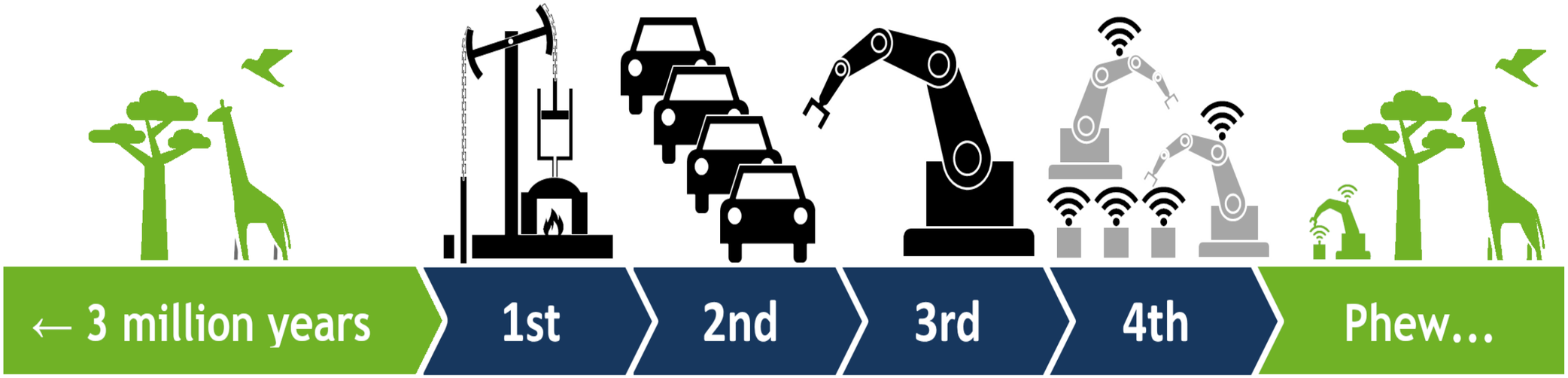


#3 Maschine as system
Human in Black box



Topic
- National critical infrastructures
- Cyber Security and Military
- Philosophy
- Nature ana Animals
- Landcape
- Gender
- Imigrant Slaves Protection

Please don't drag out Industry 4.0



Sustainable, resilient, diverse ecosystems	Mechanization, water power, steam power	Mass production, assembly line, electricity	Computer and automation	Cyber Physical Systems	De-industrial revolution, before it's too late
				2019	2021