

**coilDNA**  
The IoM company

# coilDNA introduction

AMAP-Colloquium

20. April 2023

# Agenda

- Brief introduction
- Vision
- Technology
- Benefits

# coilDNA - brief Introduction

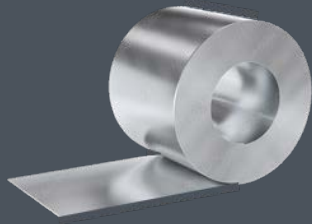
- **Foundation** 2019
- **Owner** AMAG Austria Metall AG
- **Location** Linz
- **Employees** 5
- **Purpose** Cloud-based software Development for material identification and material tracking



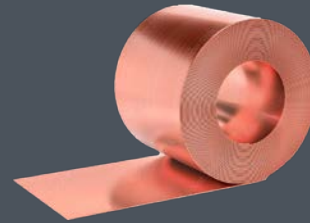
- **Application** Materials produced in a continuous process ● that are divided in further processing ●
  - casting, rolling, extrusion
  - slitting, cut to length, stamping, laser cut

# Materials

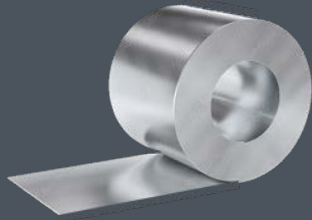
coilDNA – Fields of application



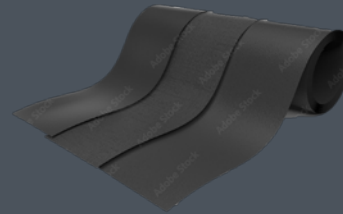
Aluminium



Copper / Brass



Steel (carbon,  
stainless, special grades)

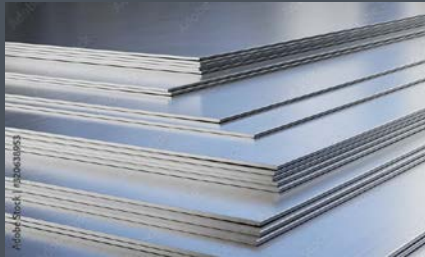


Rubber / Plastics /  
Paper

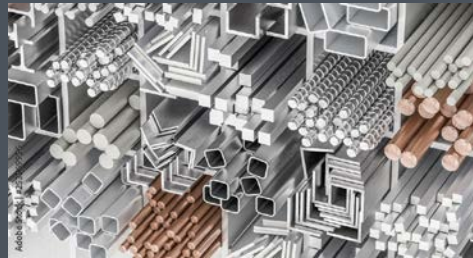
# Applications

for many different industries

Sheet, strip, foil, plate



Hot / cold rolled, roll formed



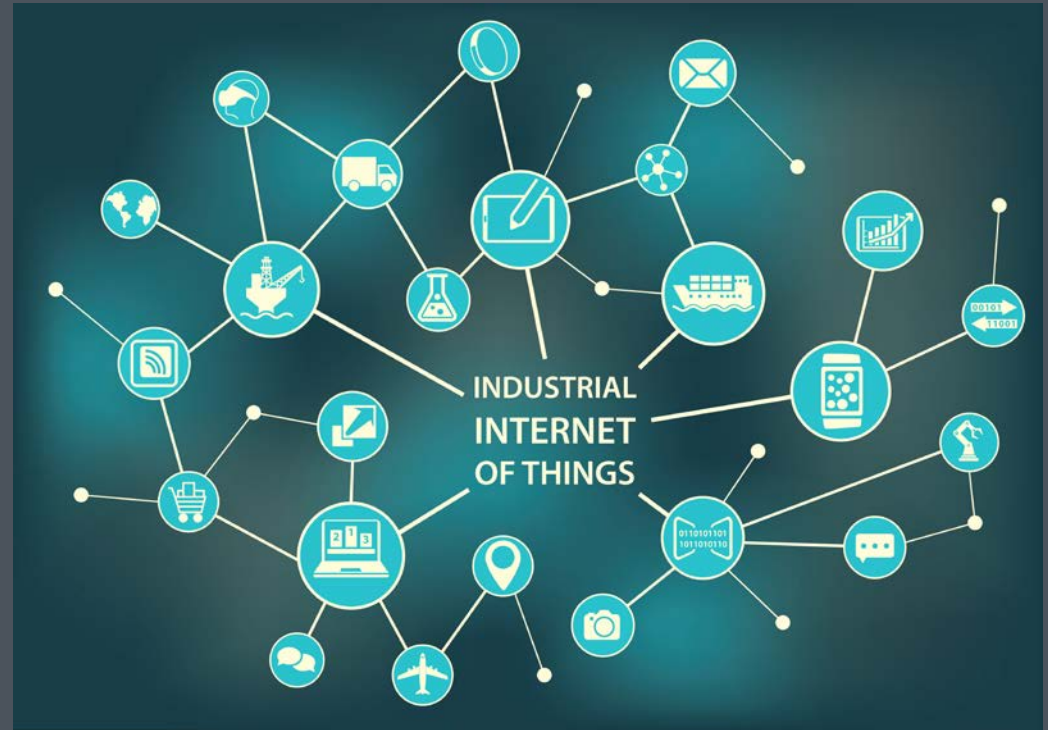
Tubes, hoses, wires

Extrusions

# Vision of coiDNA

## Basic principles of IoT or industrial IoT

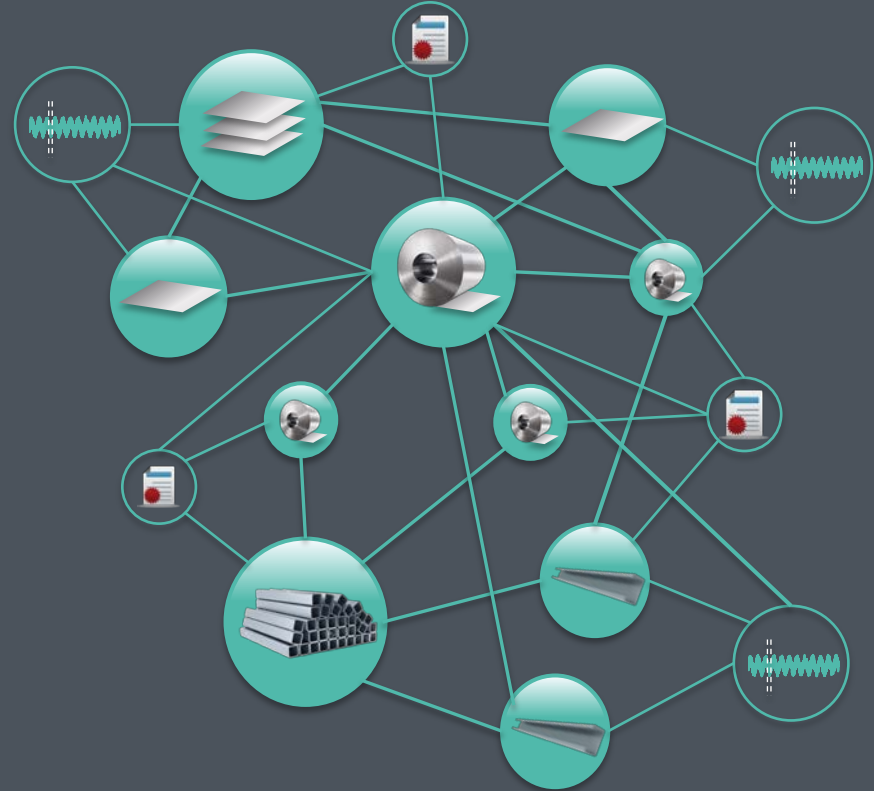
- identity for devices
- connect devices to the internet
- connect devices with data
- communication between humans, devices and applications



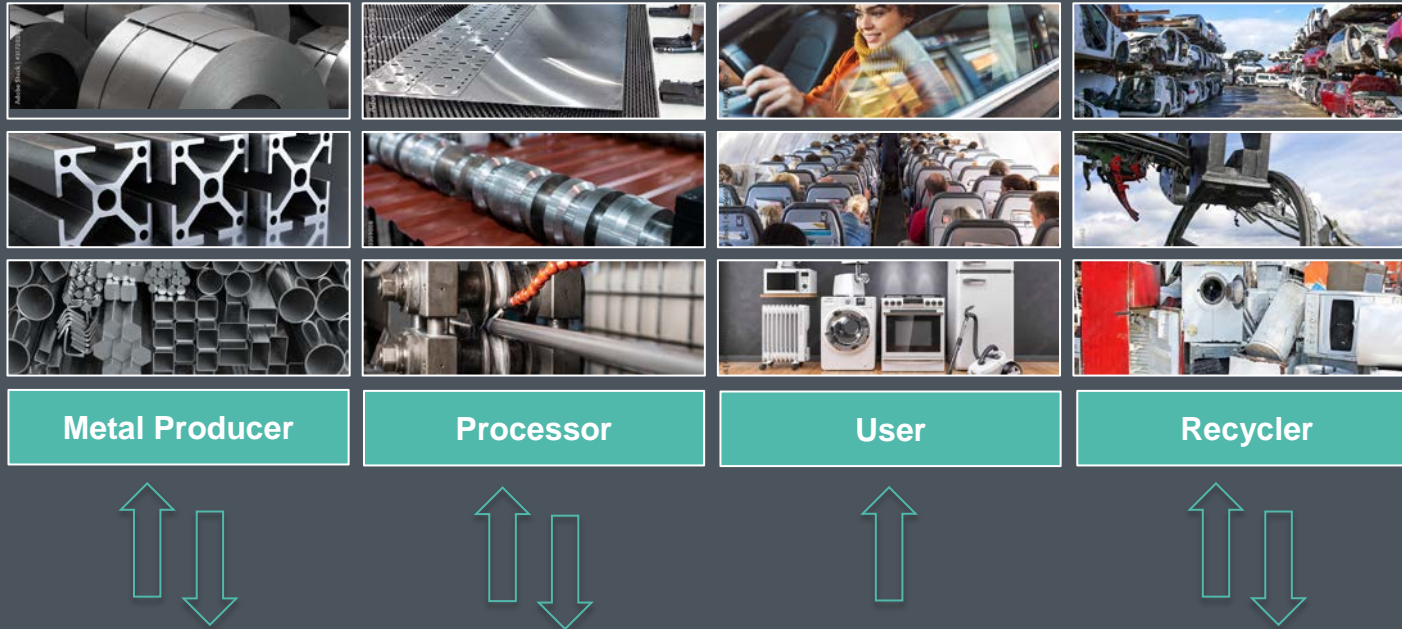
# Vision von coilDNA

IoM extension of IoT to the metals world

- identity for metal
- connect metal to the internet
- connect metal to data
- Communication from metal to applications and humans



# Vision: Data transparency in the value chain



Data / certificates from production, quality and sustainability assigned to product

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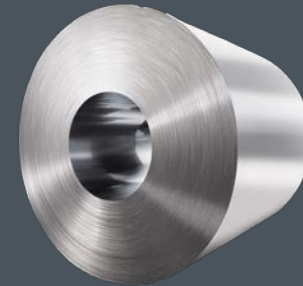
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# Ideas - Analogy

## coilDNA vs. Human DNA Sequencing

- Each human cell contains genetic information
- The entire DNA can be reconstructed from fragments
- (DNA-Sequencing)
- Each individual component contains the entire data of the master-coil (manufacturer,...)
- coilDNA code is structured similarly to the genetic information coding (C, T, A, G)



# coilDNA – identity for product and its parts



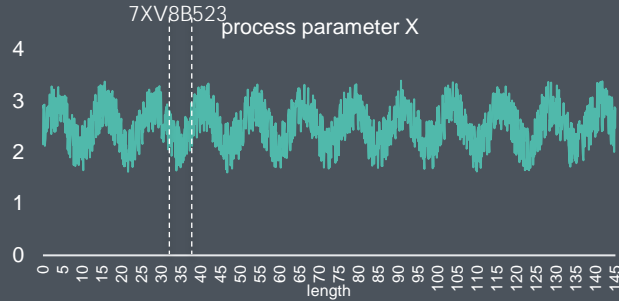
14

characters

are the key to the world of  
individual product information  
(DNA of the product)

# coilDNA technology

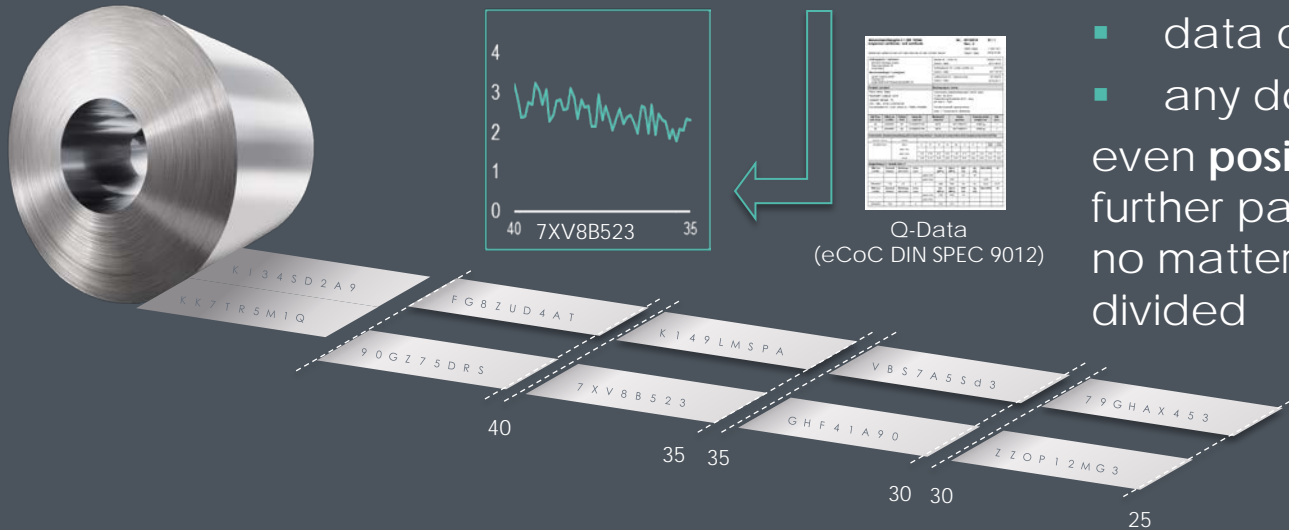
Patented coilDNA-coded information track on material surface



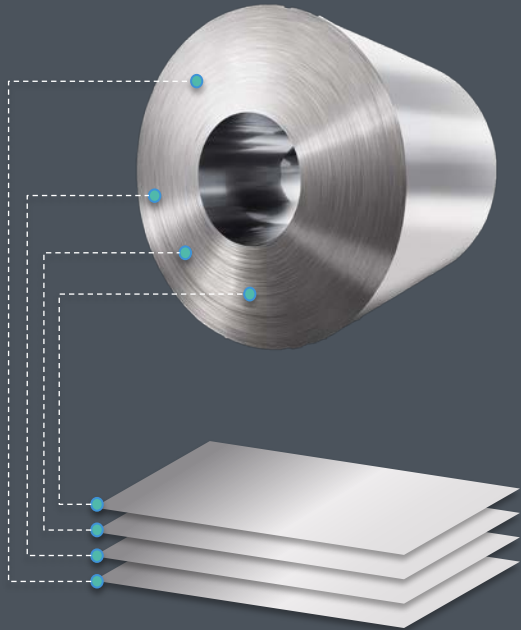
Webbased assignment and retrieval of

- production data
- test data
- data of further processing steps
- any documents

even **position-wise** and on any further parts made of it no matter how the coil/sheet is divided



# coilDNA technology features



- Position-based assignment enables production optimization at part level
- High flexibility regarding data formats (reports, documents, raw data, pictures)
- Production- and quality related data can be precisely assigned to the individual parts / position
- Sustainability data unambiguously assignable to every piece
- Perfect traceability
- Protection against forgery
- Blockchain Notarization of Data

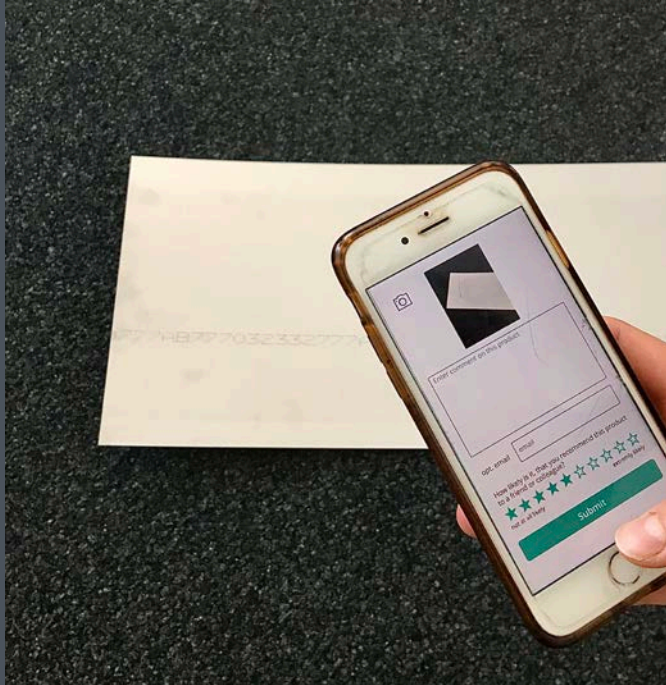
# coilDNA added value

for producers, processors, users, recyclers

- Optimization production processes
- Reducing downtime
- Lowering quality defect costs
- Highly efficient technical communication
- Tracking properties along the value chain to the end customer and recycling (e.g.: sustainability parameters as CO<sub>2</sub> footprint)

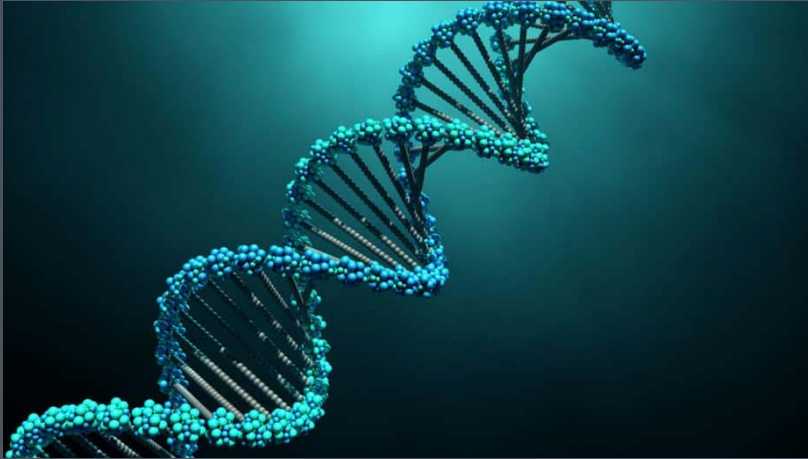


# coilDNA communication features



- New ways of communication between producers and processors
- Immediate feedback on the product to the producer ([coilDNA Chat](#))
- Sharing / recommendation of product to third parties ([coilDNA Share](#))
- Check validity of paper documents ([coilDNA Check](#))

# Final food for thought



*Will future value-added digitalized processes and material cycles still be able to function without the **individual** traceability of **individual** parts?*

# coiDNA

## The company

coiDNA GmbH

- commercialisation of the technology
- web services
- Main-Office: Linz, Austria
- partnership with MES, industrial printer provider

contact – managing directors

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<https://www.coildna.com/>

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**IoM – Internet of Metals becomes reality**



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