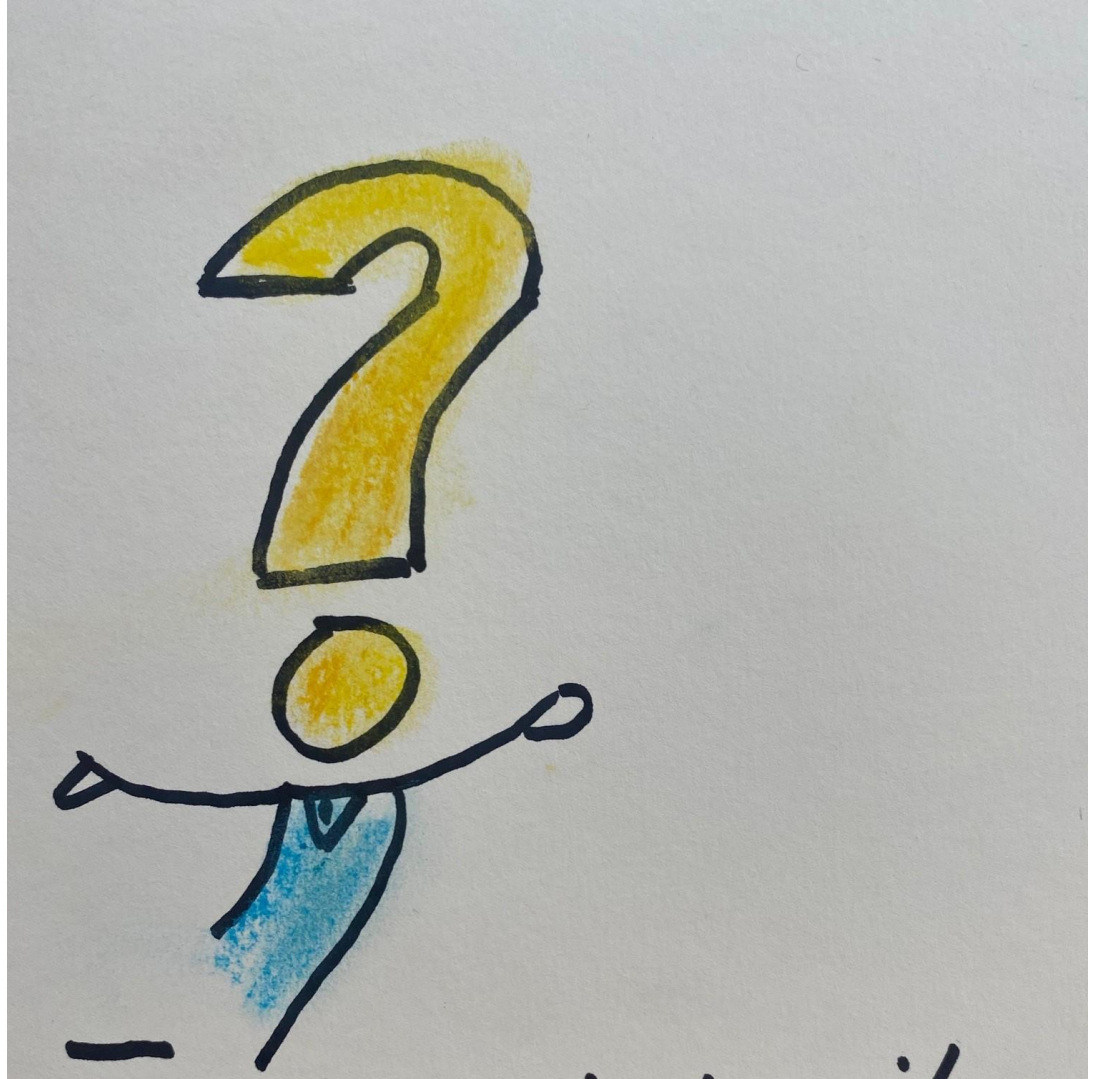
29. Windenergietage Potsdam
11.11.2021

Automatisierung in der Windparkplanung

BY Timo Siebels European Energy Hamburg GmbH

EUROPEAN ENERGY

NL HAMBURG



Fragen jederzeit stellen!

ABOUT US

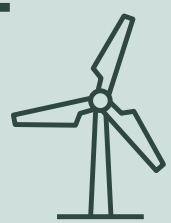
OUR
BUSINESS

EUROPEAN ENERGY IS BUILT ON FOUR PILLARS

Solar Power

Active in Europe, Australia and Americas

Onshore Wind



Active in Europe and Brazil

Offshore Wind

Active in Europe

Downstream Technologies

Active in Europe

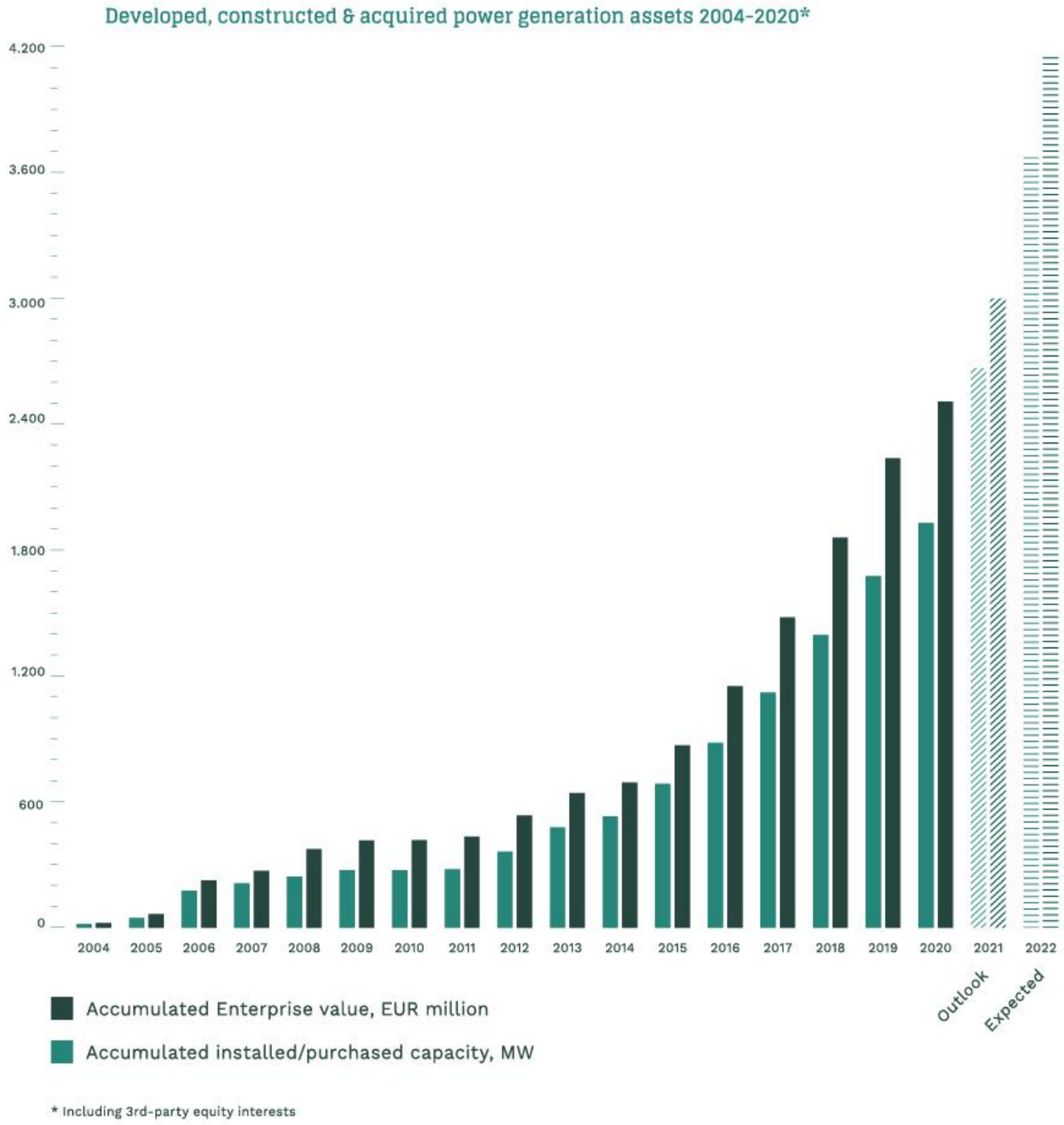
European Energy in the World

The European Energy Growth Story

European Energy was founded in 2004 when CEO Knud Erik Andersen and Head of Construction Mikael D. Pedersen joined forces in the first wind project.

Shortly after Executive Vice President Jens Peter Zink joined the company. In 2008 European Energy developed the first solar project.

In 2021 European Energy will reach a new milestone crossing the line of 2 GW renewable energy capacity developed or purchased since 2004.



Extensive Experience in Power Sales

European Energy has more than 5 years experience in doing PPAs and have today four dedicated PPA specialists today. All the energy facilities that European Energy expects to divest in 2021 have long-term offtake agreements.

Utility PPAs

Axpo

Energi Danmark

VINDENERGI DANMARK

NEAS ENERGY

Danske Commodities

E.ON

RWE

Eesti Energia

Government auctions

3

5

6

5

Corporate PPAs

NISSAN

Google

MWSC

Case: Corporate Power Purchase Agreement with Apple

European Energy has constructed a 50 MW solar farm and two onshore MHI Vestas v164 wind turbines with a combined effect of 66,4 MW to supply Apple's new data centre in Denmark.

Unser Team in Deutschland

Persönlich ansprechbar, verbindlich & kompetent

- Hauptsitz in Söborg, Dänemark
- Verwaltungssitz Deutschland in Husum
- Zwei Niederlassungen in Hamburg und Teuchern
- Zwei dezentrale Projektleitungen in Herford und Hannover
- Aktuell 81 Wind- und Solarprojekte in Deutschland

Wie wir arbeiten

Unsere Philosophie

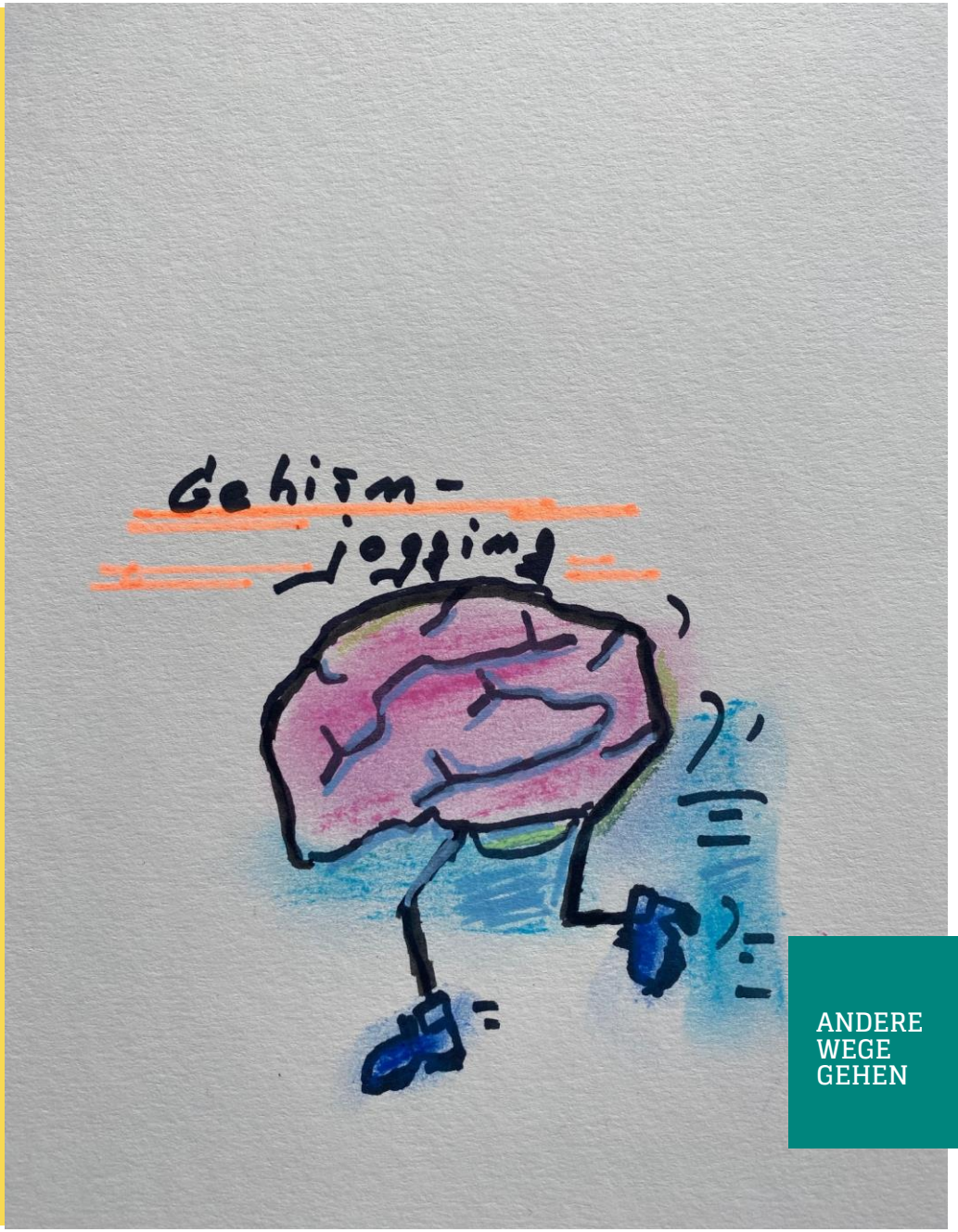
Wir arbeiten “Dänisch pragmatisch”

Das heißt für Sie:

- Unkompliziert und direkt
- Schnell
- Partnerschaft auf Augenhöhe
- Handschlag-mentalität

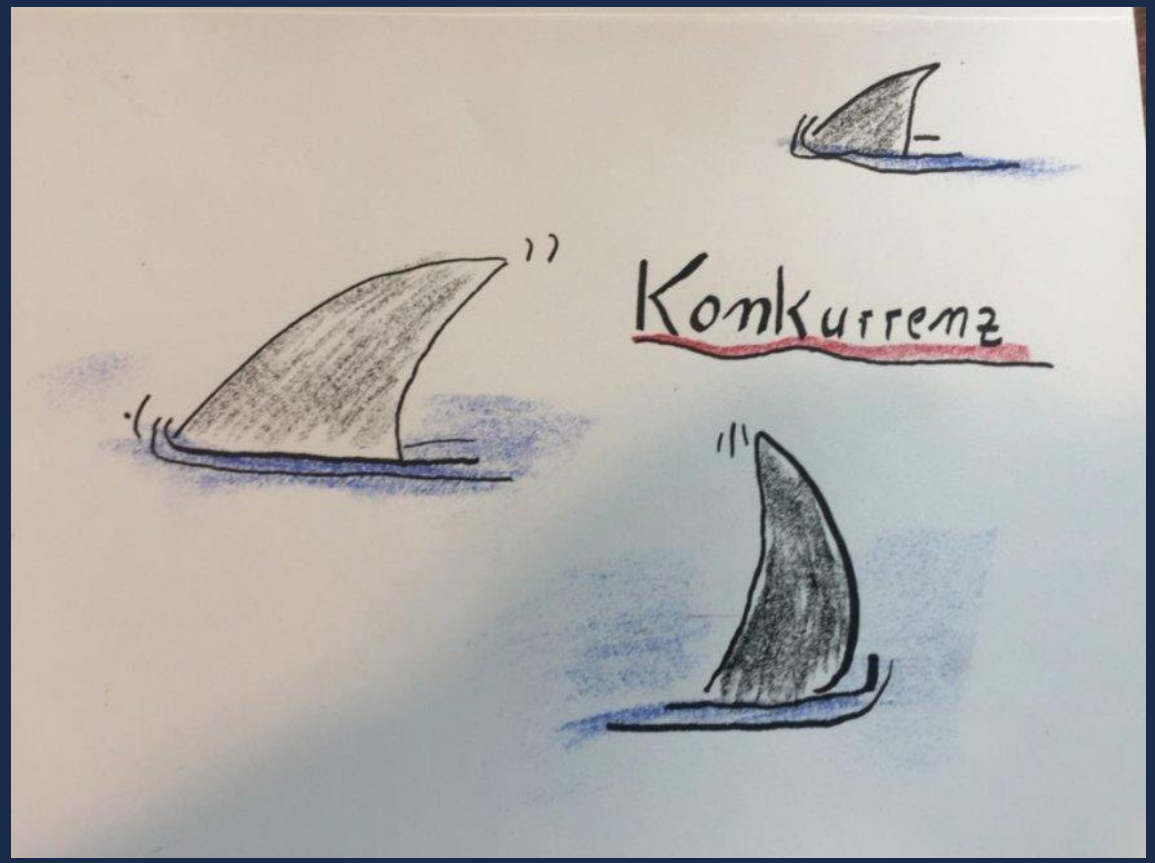
EUROPEAN ENERGY

Aufbau einer Niederlassung Hamburg (Start Sommer 2020)



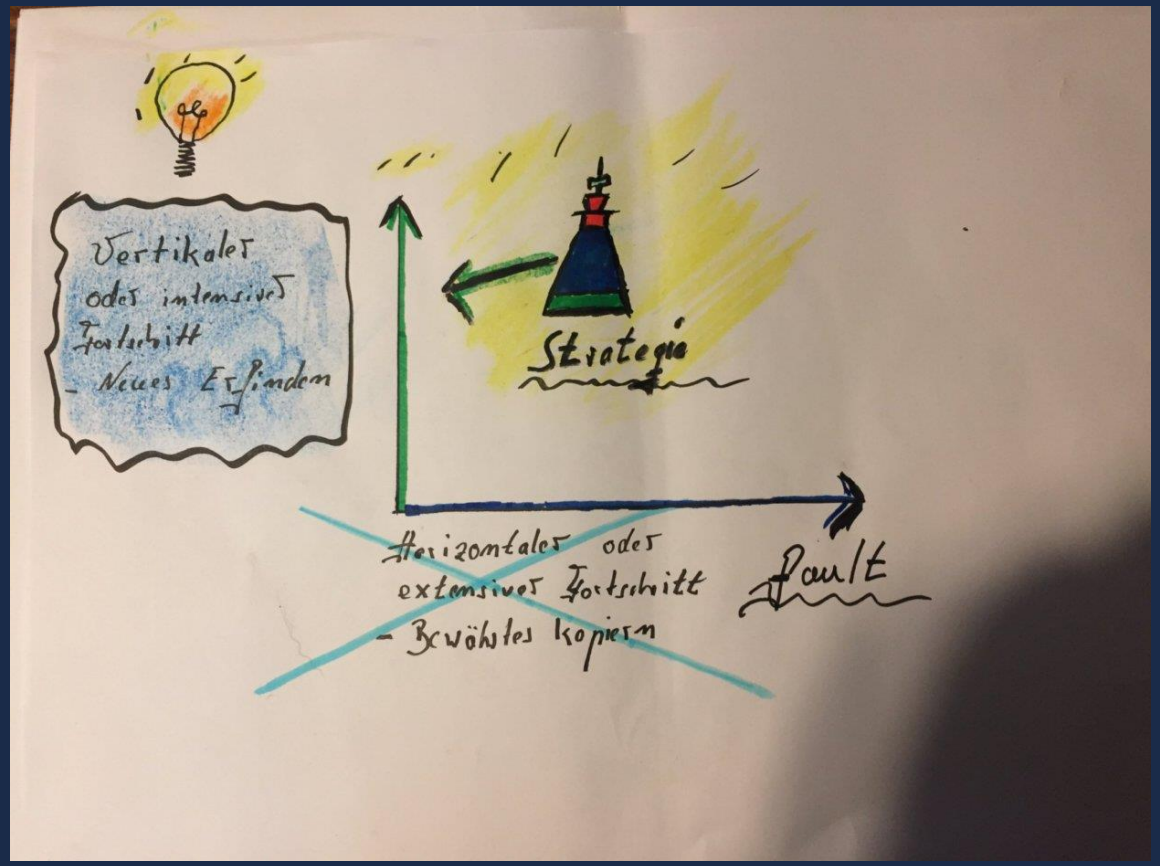
ANDERE
WEGE
GEHEN

UND WAS MACHT IHR SO?



DANGER

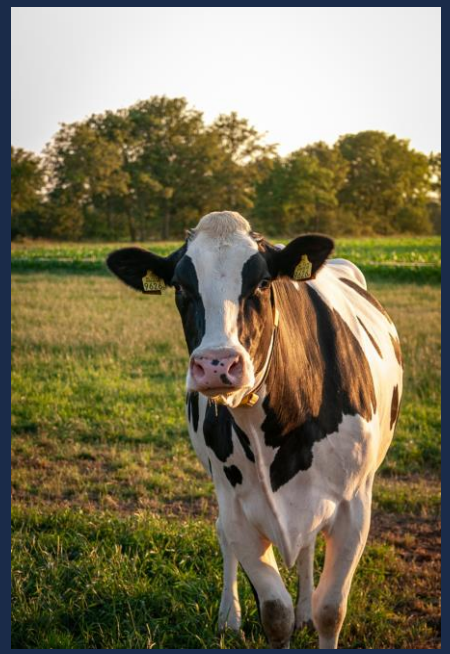
DER UNTERSCHIED



UM DIE ECKE

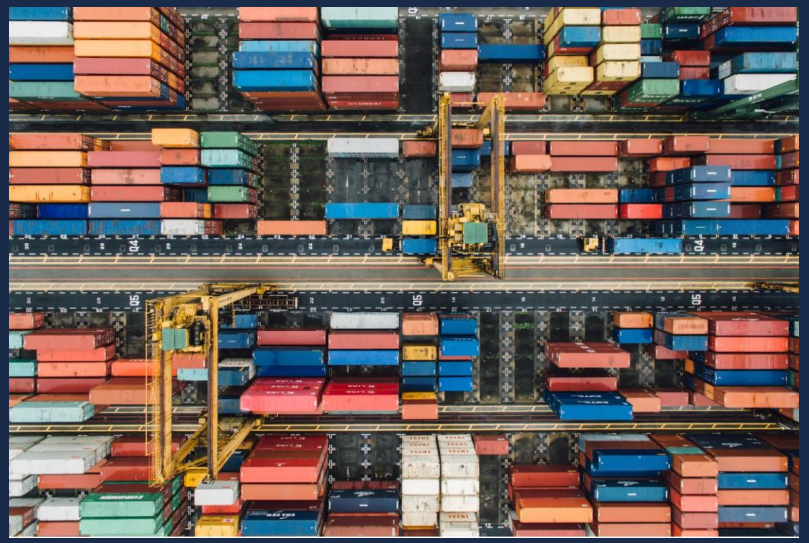
WAS HAT EINE KUH MIT PROZESSEN ZU TUN?

WAS HAT EINE HERDE KÜHE MIT PROZESSEN ZU TUN?



DIE PRAXIS IST GANZ EINFACH

AUTOMATISIERUNG / DIGITALISIERUNG BRAUCHT STANDARDS UND PROZESSE



EINFACH
MAL
MACHEN

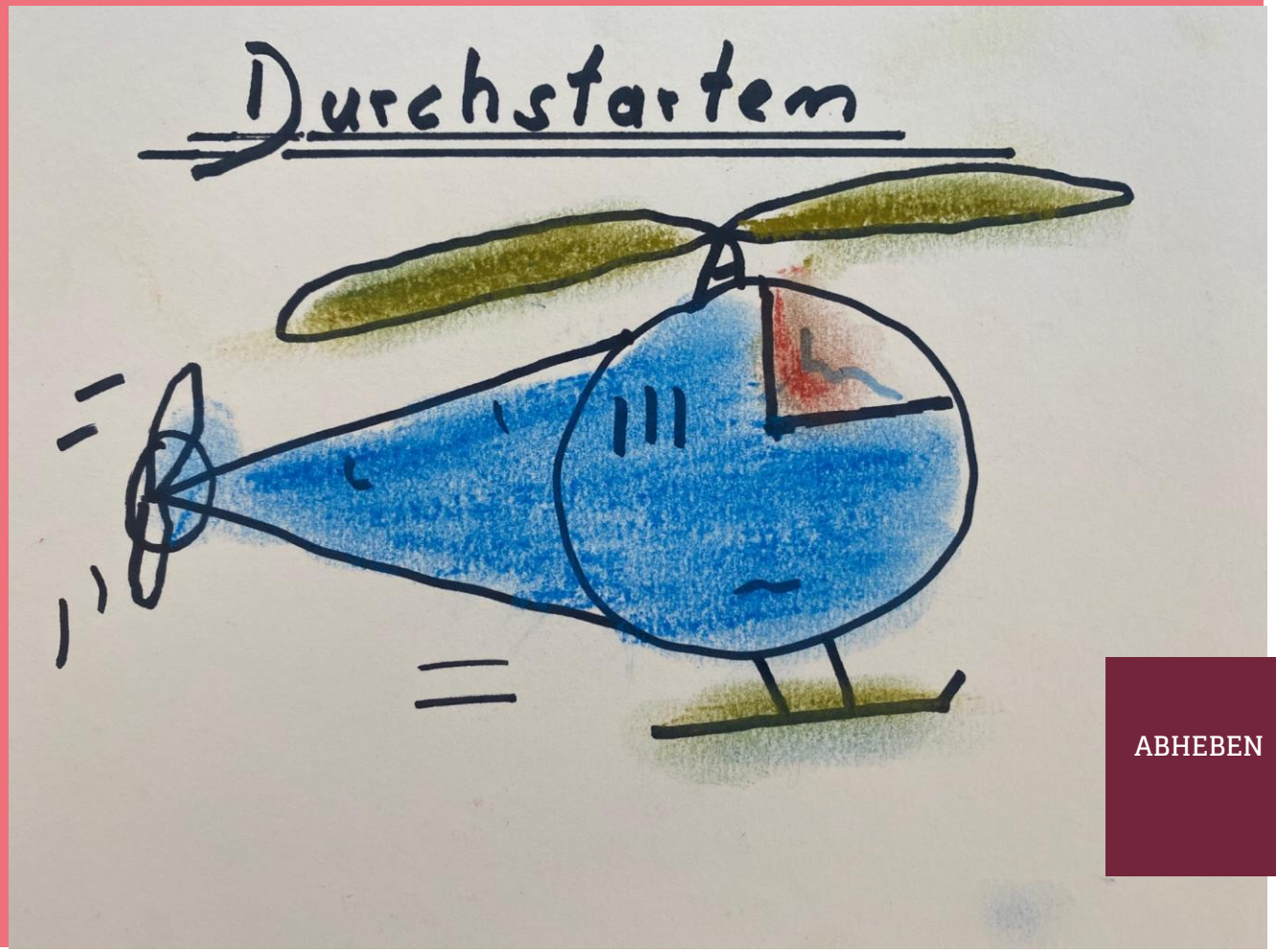
DIGITALE PROZESSE

- Die Prozesse der EE Projektentwicklung werden so aufgebaut, dass viele Arbeitsschritte digital erfolgen.
- Diese Methodik bietet folgende Vorteile:
  - Effizienzsteigerung
  - Gleichbleibende Qualität
  - Reduzierung von Übertragungsfehlern
  - Transparenz in den Projekten
  - Steigerung der Kundennähe
  - Steigerung der Anzahl an Projekten

Durch die Digitalisierung der Niederlassung werden entscheidende Wettbewerbsvorteile generiert.

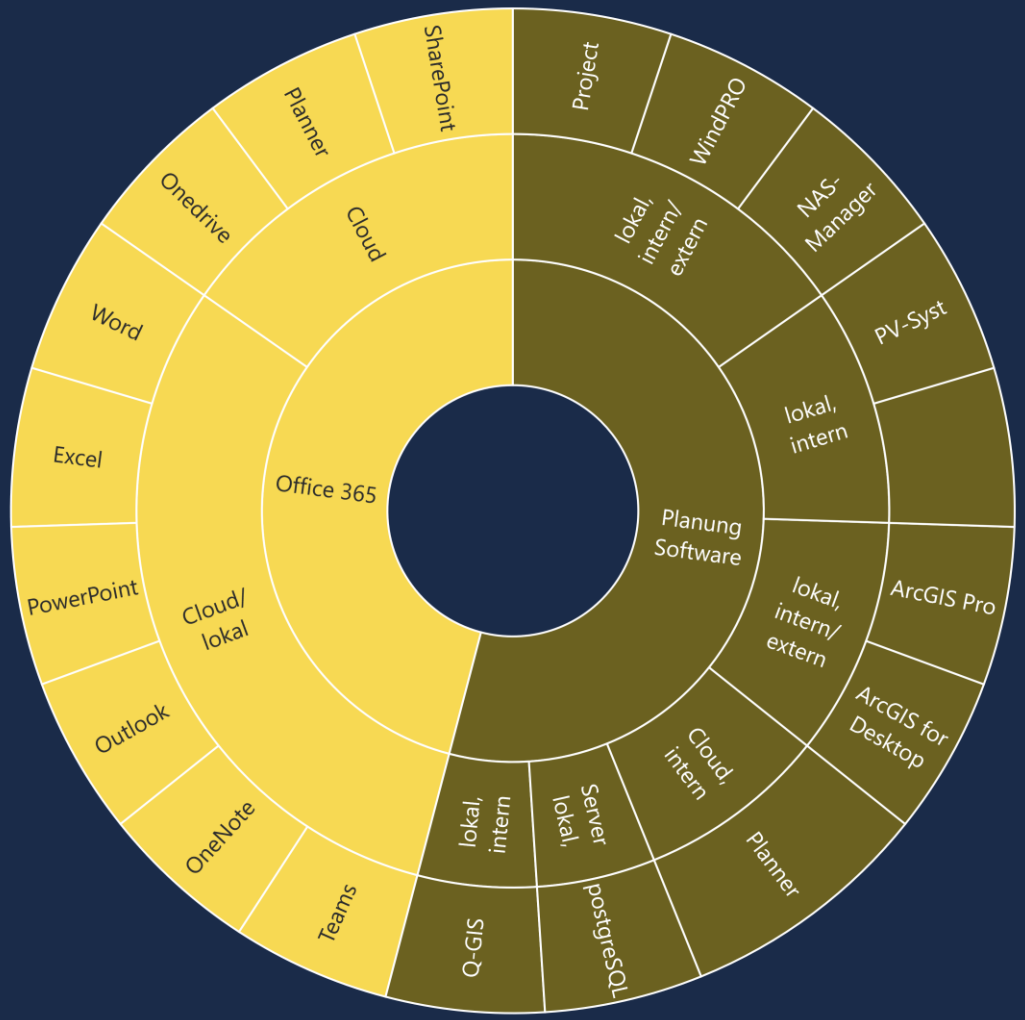
FERTIG

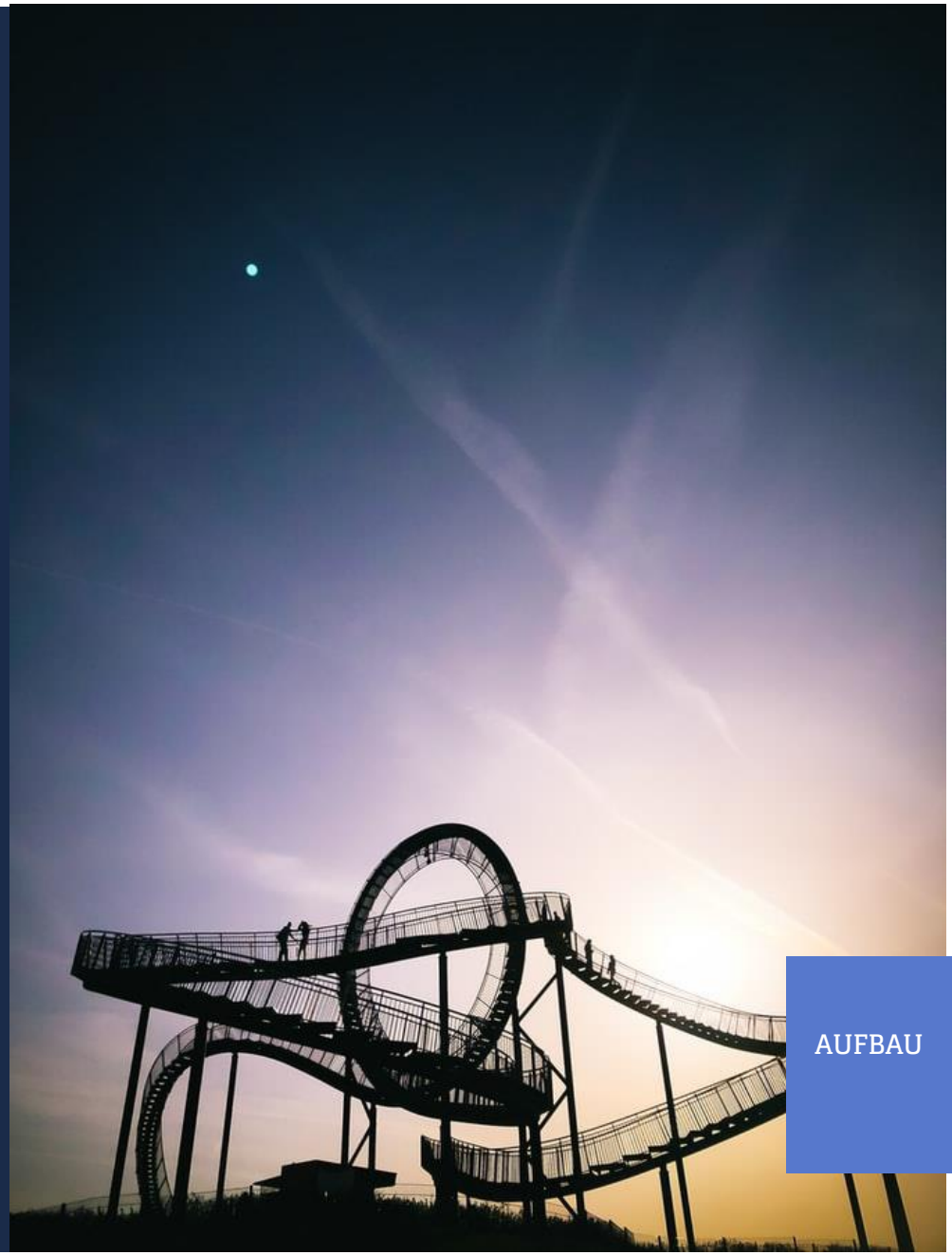
READY FOR TAKE OFF



ABHEBEN

EE SOFTWARE ANWENDUNGEN





AUFBAU

BITTE PYTHON NICHT MIT PYTHON VERWECHSELN,-)

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```
if lyrx_lyrs:
    lyrx_lyr = lyrx_lyrs[0]

if not lyrx_lyr:
    if layer_file:

        # Add *.lyrx-file to group
        lyrx = arcpy.mp.LayerFile(layer_file)
        project_map.addLayerToGroup(group_layer, lyrx, 'TOP')
        lyrx_lyr = group_layer.listLayers()[0]

        lyrx_fc = project_map.addDataFromPath(fc_or_lyr)
        fc_connection_properties = lyrx_fc.connectionProperties
        lyrx_lyr.updateConnectionProperties(lyrx_lyr.connectionProperties, fc_co

        # Update *.lyrx-file symbology
        sym = lyrx_lyr.symbology
        if sym.renderer.type == 'UniqueValueRenderer':
            sym.renderer.fields = sym.renderer.fields  # Makes a symbology field
        lyrx_lyr.symbology = sym

        project_map.removeLayer(lyrx_fc)

        # https://pro.arcgis.com/de/pro-app/latest/arcpy/metadata/metadata-class
        if keep_metadata:
            # Get the Metadata object from fc_or_lyr file
            fc_or_lyr_md = md.Metadata(fc_or_lyr)

            # Assign the Metadata object's content to a target item
            tgt_item_md = lyrx_lyr.metadata
            # if not tgt_item_md.isReadOnly:
            tgt_item_md.copy(fc_or_lyr_md)
            tgt_item_md.save()
```

5e9f358228e89123d6dbc21582e9d7fb157b8d4

```
if lyrx_lyrs:
    lyrx_lyr = lyrx_lyrs[0]

if not lyrx_lyr:
    if layer_file:

        # Add *.lyrx-file to group
        lyrx = arcpy.mp.LayerFile(layer_file)
        project_map.addLayerToGroup(group_layer, lyrx, 'TOP')
        lyrx_lyr = group_layer.listLayers()[0]

        desc = arcpy.Describe(fc_or_lyr)
        if desc.dataType == 'FeatureLayer' and aprx_new != 'CURRENT':
            lyrx_fc = project_map.addDataFromPath(desc.catalogPath)
            del desc
        else:
            lyrx_fc = project_map.addDataFromPath(fc_or_lyr)

        # lyrx_fc = project_map.addDataFromPath(fc_or_lyr)
        fc_connection_properties = lyrx_fc.connectionProperties
        lyrx_lyr.updateConnectionProperties(lyrx_lyr.connectionProperties, fc_con

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        lyrx_lyr.symbology = sym

        project_map.removeLayer(lyrx_fc)

        # https://pro.arcgis.com/de/pro-app/latest/arcpy/metadata/metadata-class
        if keep_metadata:
            # Get the Metadata object from fc_or_lyr file
            fc_or_lyr_md = md.Metadata(fc_or_lyr)
```

TÄGLICH BROT

DISRUPTIV TECHNOLOGIE

Ich glaube an das Pferd. Das Automobil ist eine vorübergehende Erscheinung.

** Kaiser Wilhelm II*

WER NEUE ANTWORTEN WILL, MUSS NEUE FRAGEN STELLEN *GOETHE

#WINDISTUNSERBUSINESSUNDPVAUCH

NIMMT GERNE KONTAKT AUF

EUROPEAN ENERGY