

Professional Development and Career Progression for Data Scientists

Grow.

Professional Development and Career Progression for Data Scientists

Noa Tamir

Freelance Data Scientist and Analytics Consultant

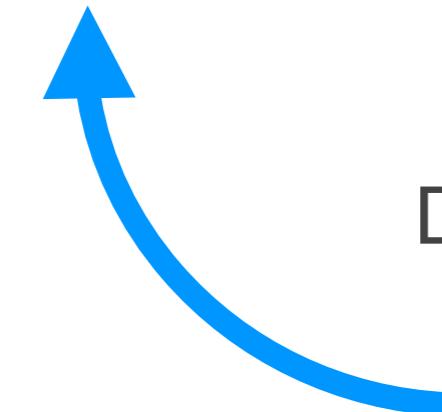
Data Scientist

Senior Data Scientist

Data Science Technical Lead

Data Science Team Lead

Director of Data Science



@noatamir



noatamir



noatamir.com



noatamir

Noa Tamir

Freelance Data Scientist and Analytics Consultant

R-Ladies

Women in Machine Learning and Data Science

satRday

R Forwards

NumFocus DISC

Ampair



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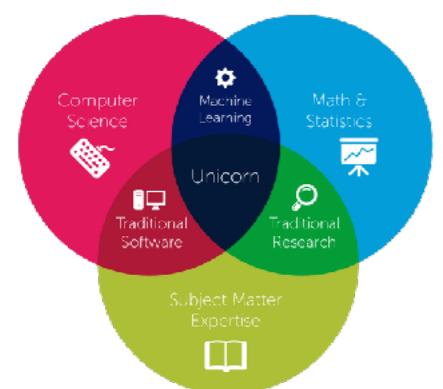
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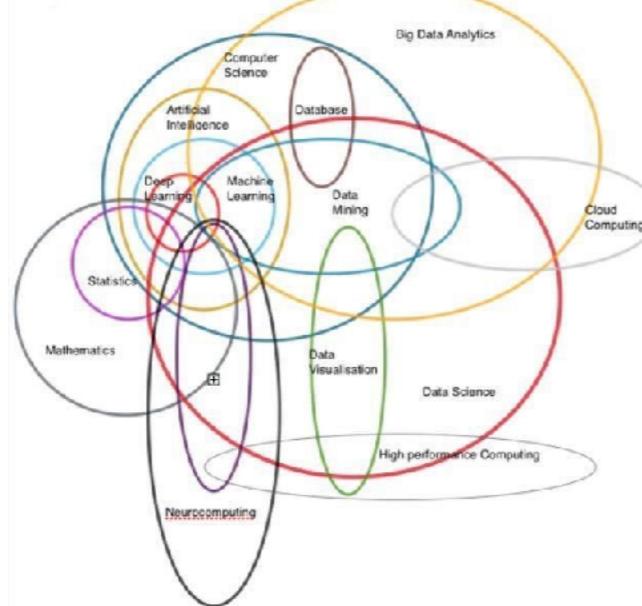
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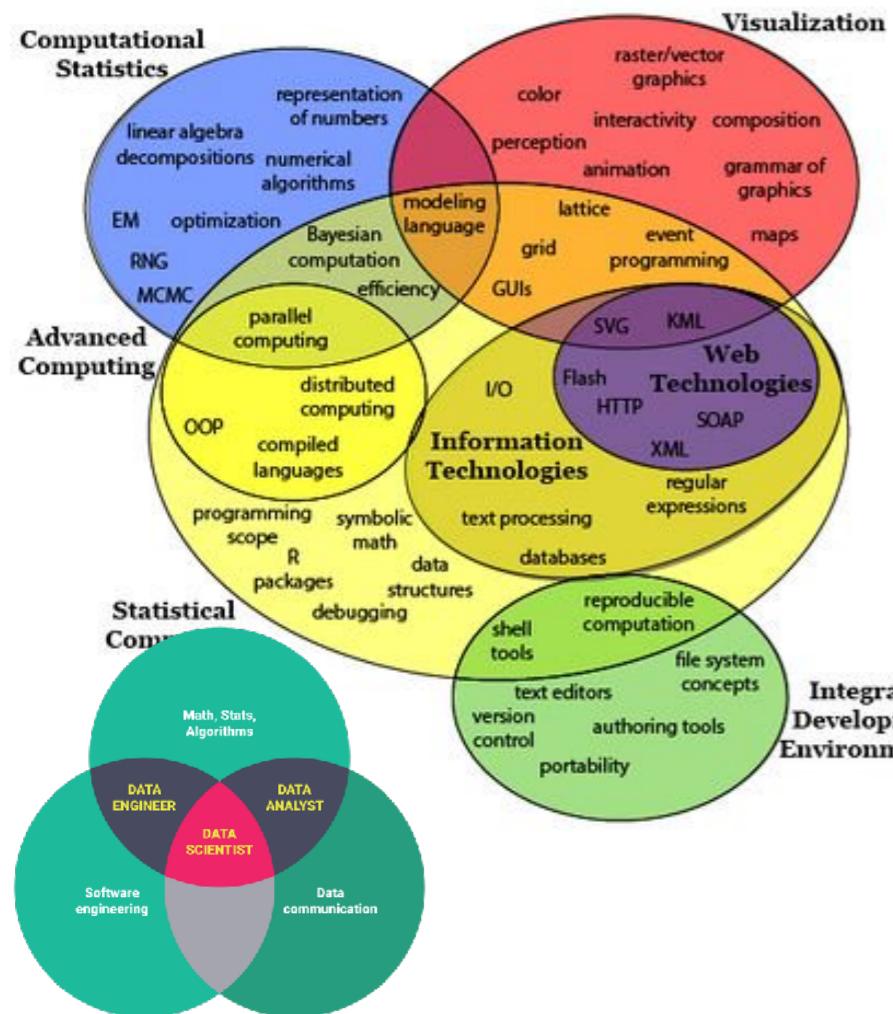
Data Science



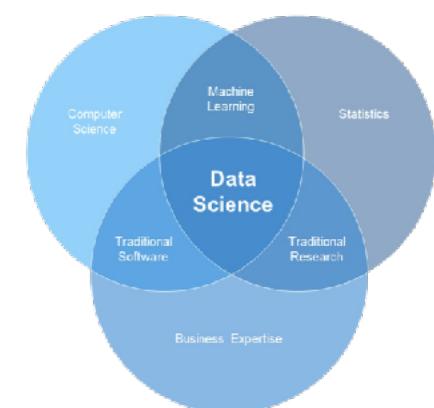
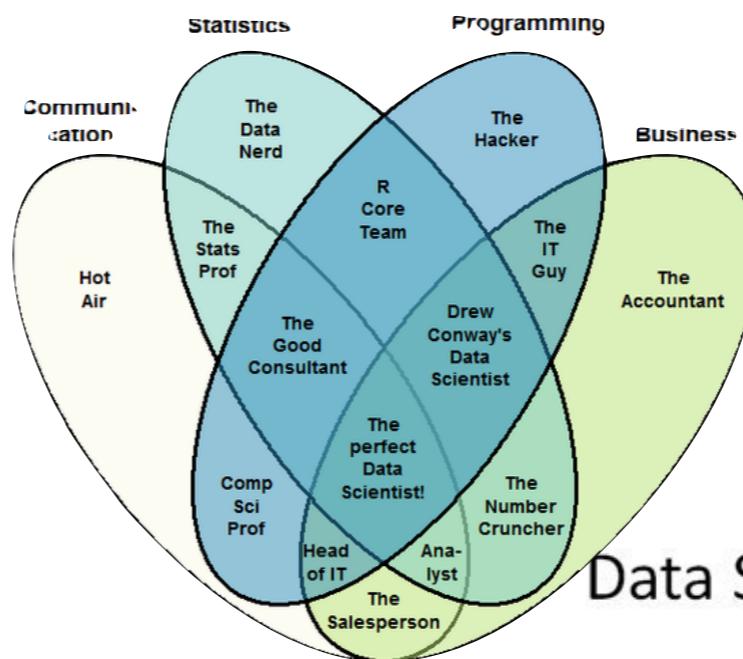
Relation between techniques of Big Data Analytics



This isn't even how Venn Diagrams work??

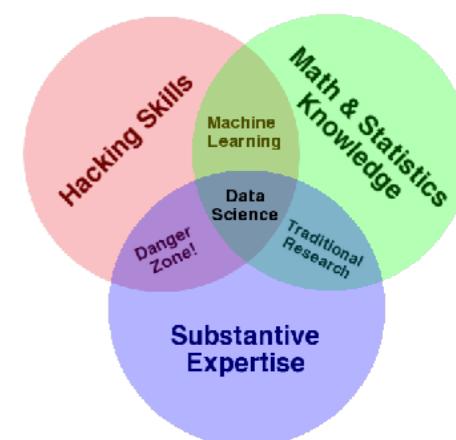
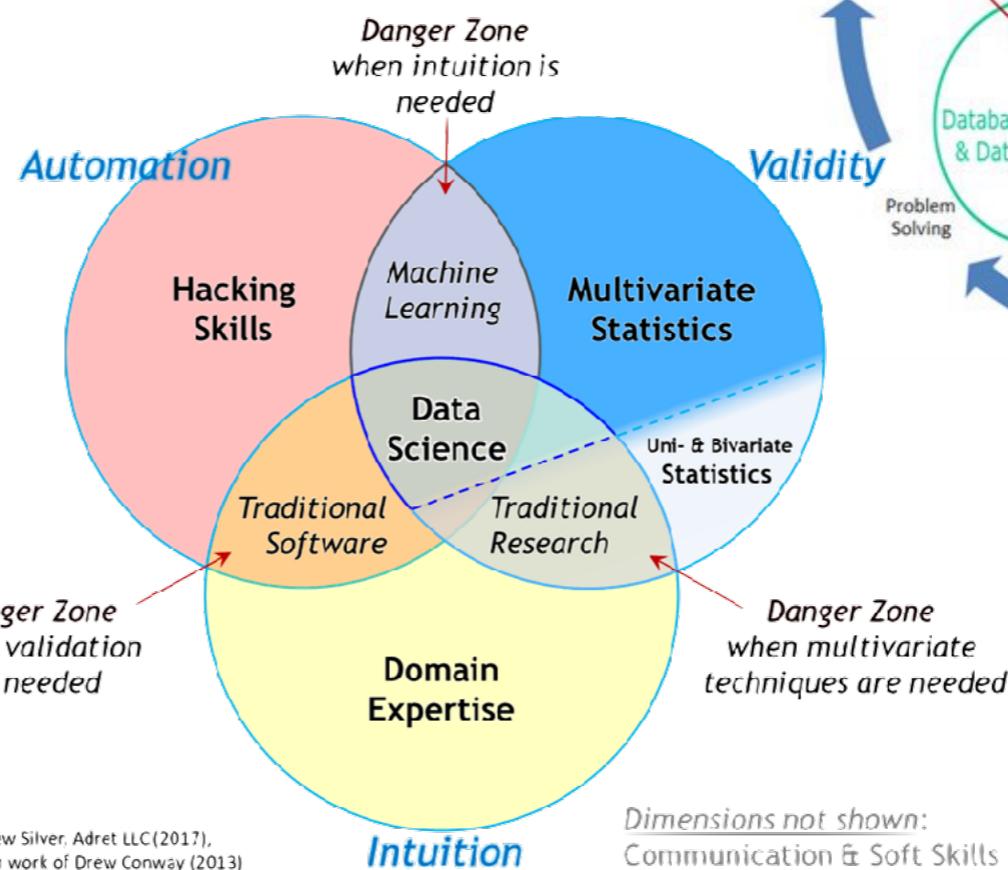
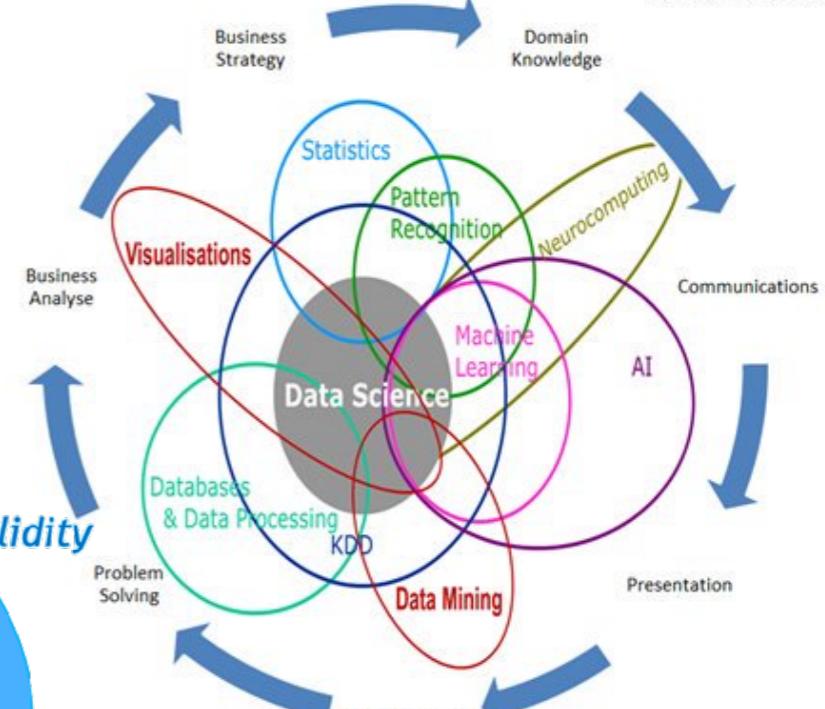


The Data Scientist Venn Diagram



Data Science Is Multidisciplinary

By Brendan Tierney, 2012



by Andrew Silver, Adret LLC (2017),
builds on work of Drew Conway (2013)

Dimensions not shown:
Communication & Soft Skills

Career Tracks

Skills: Levels, “Hard”, “Soft”

Mindset
Resources
In Practice

Where's the “Data Science Part”?





Tracks



“Tracks”

“Tracks”

Junior



Professional



Senior



...and then? ...

“Tracks”

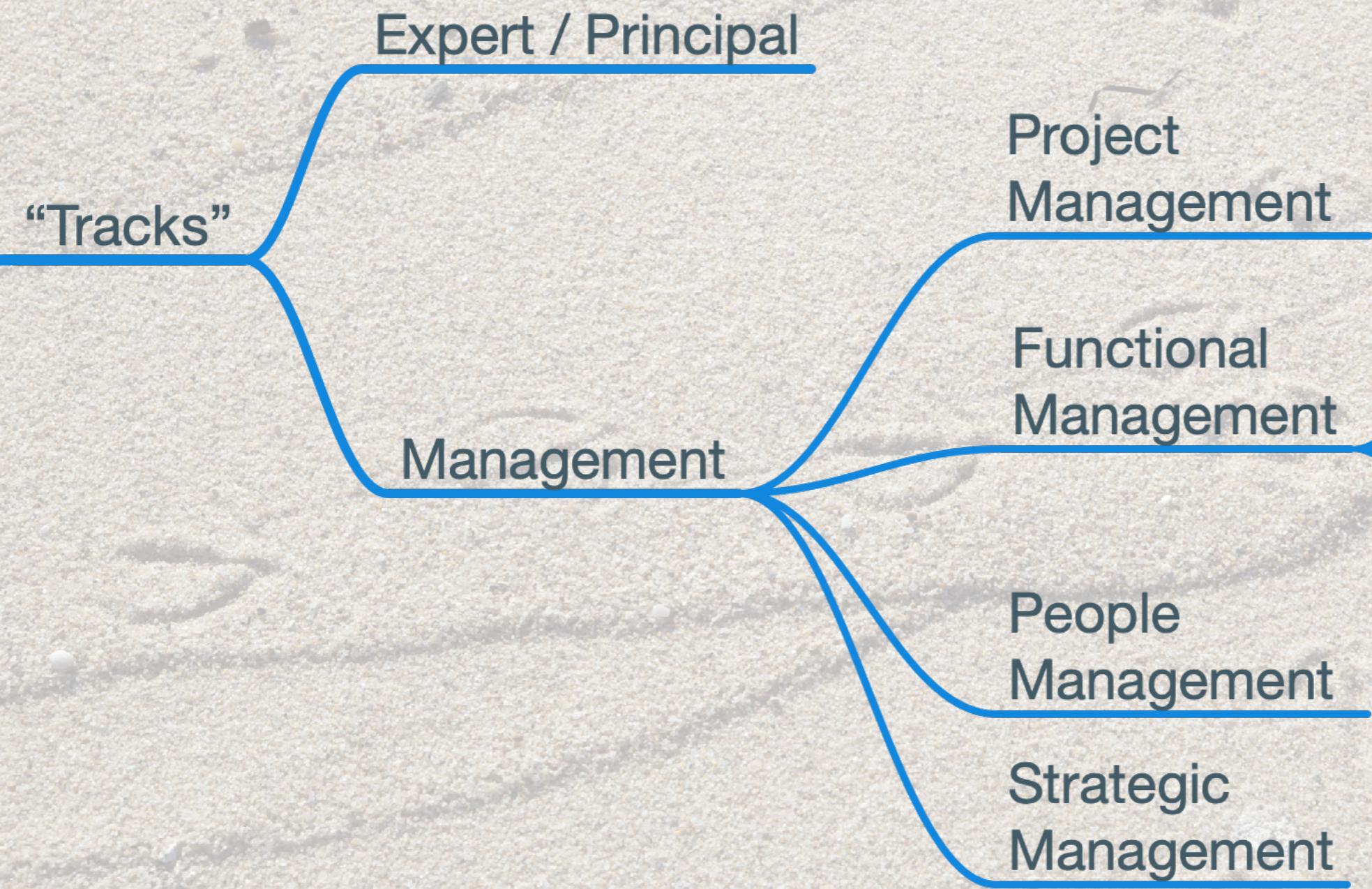


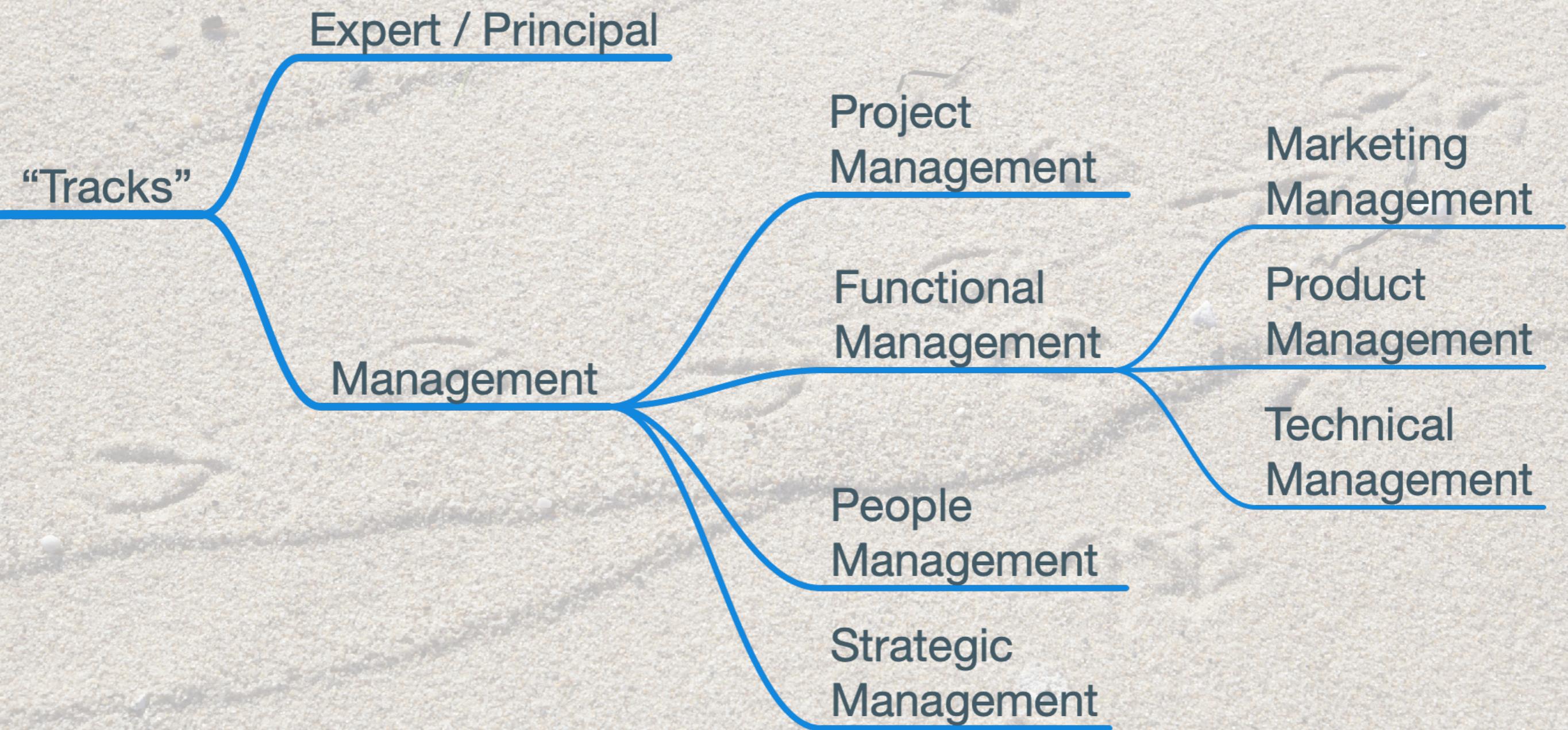


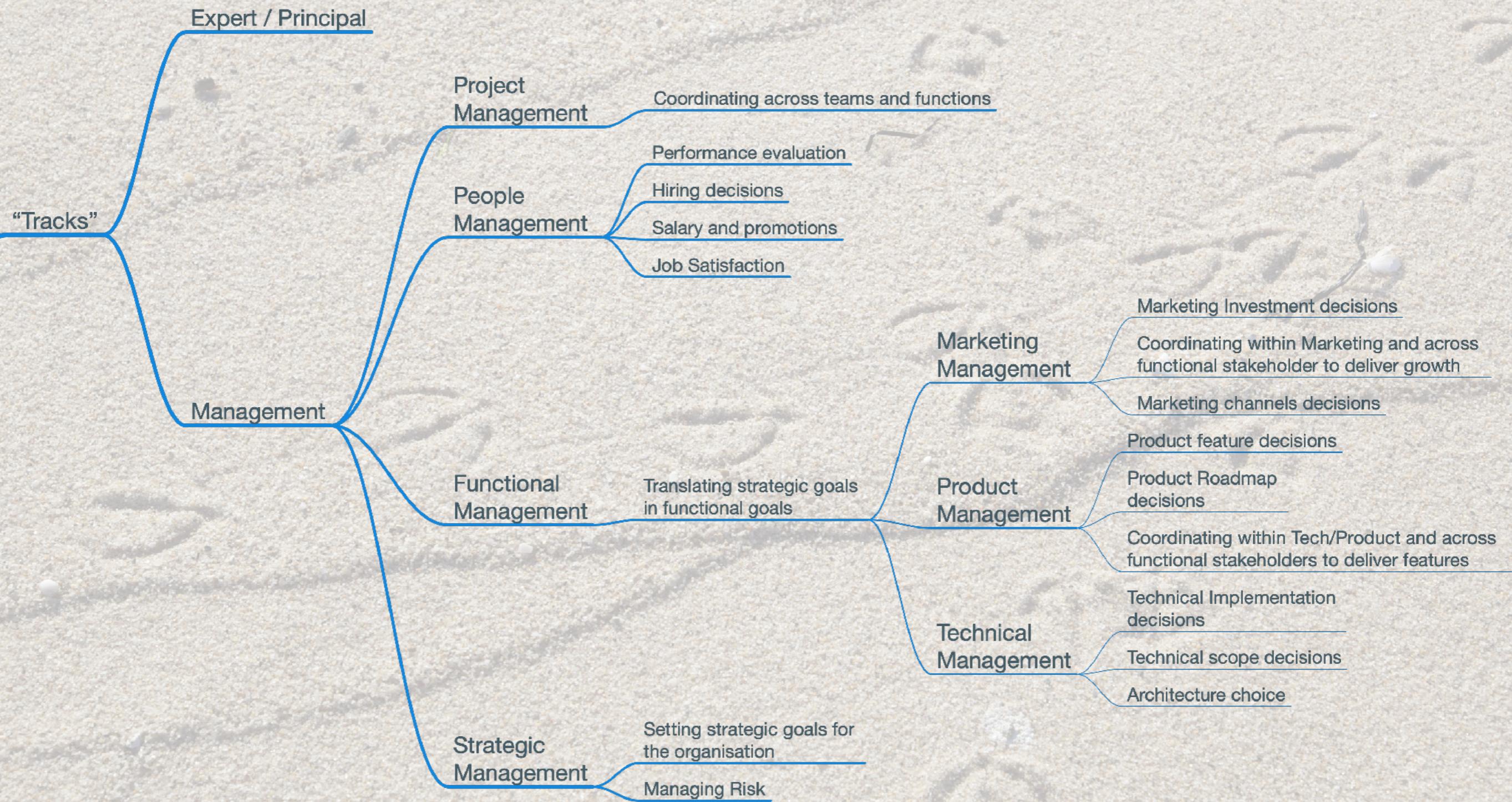
Expert / Principal

“Tracks”

Management



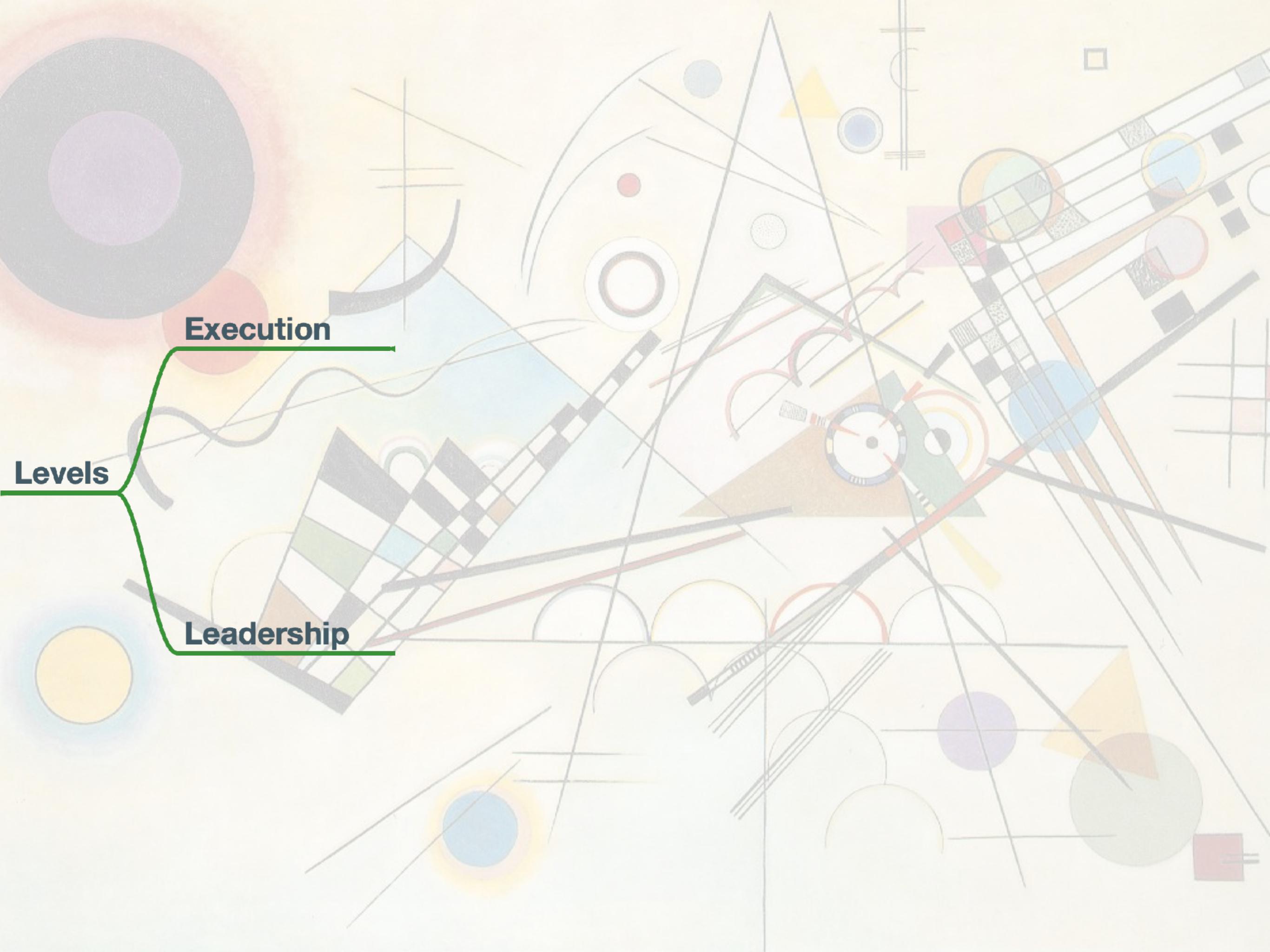




The background of the slide is a vibrant, abstract geometric composition. It features a variety of shapes including circles, triangles, and squares in shades of black, white, yellow, red, blue, green, and purple. These shapes are arranged in a dynamic, overlapping manner, creating a sense of depth and movement across the entire frame.

Skill Levels

Execution
Leadership
Knowledge



Levels

Execution

Leadership



no experience,
task focus

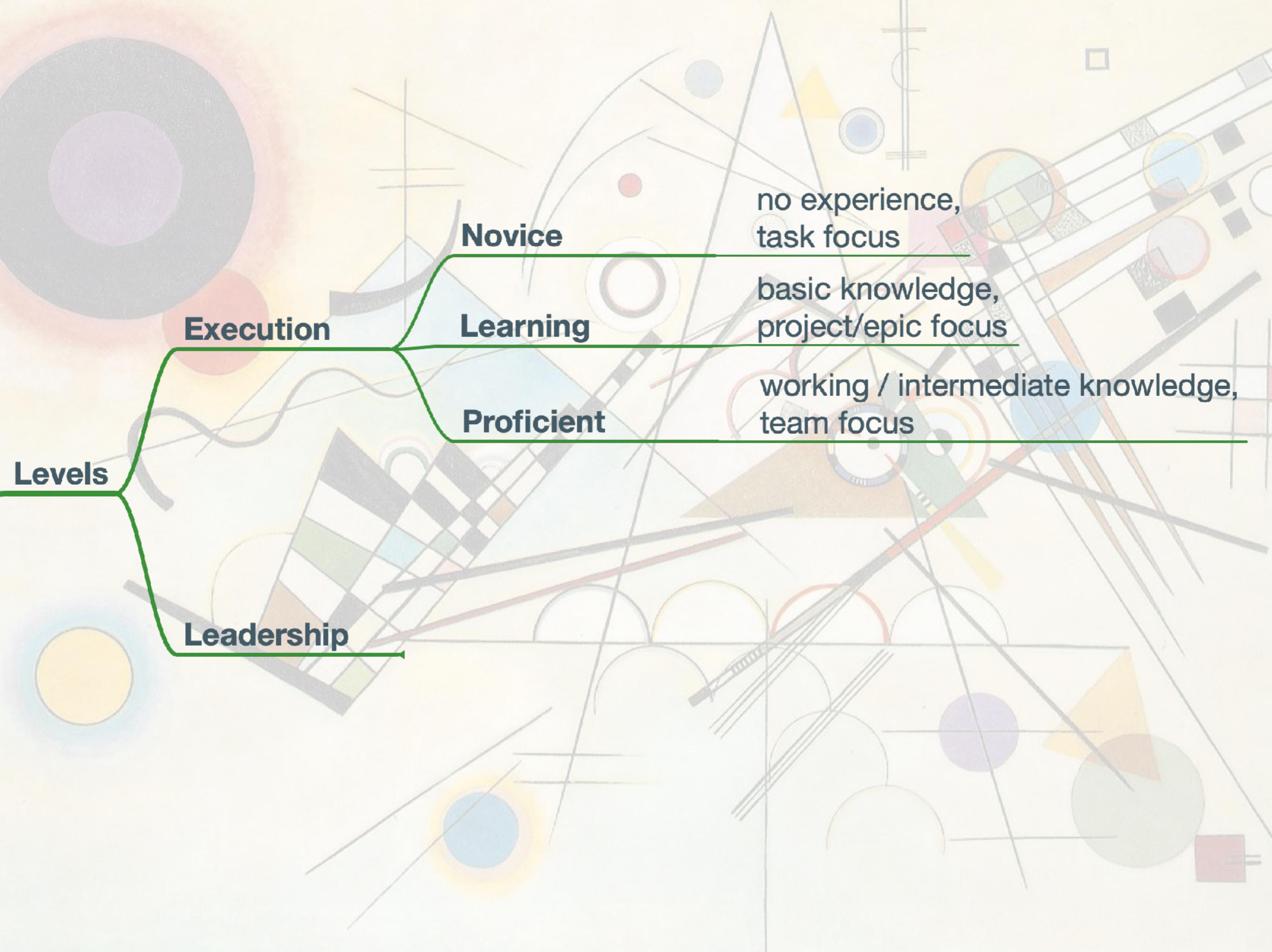
Novice

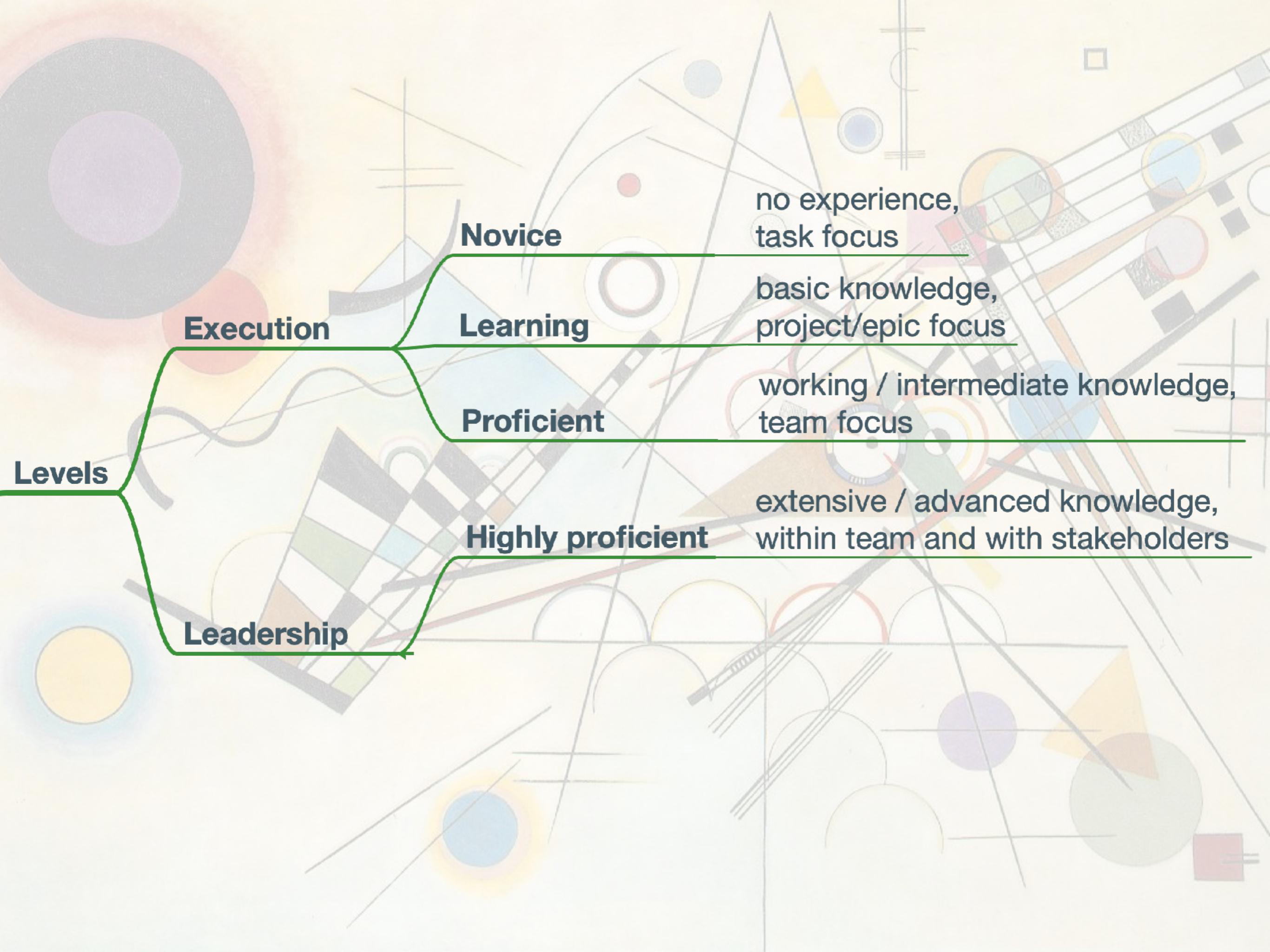
Execution

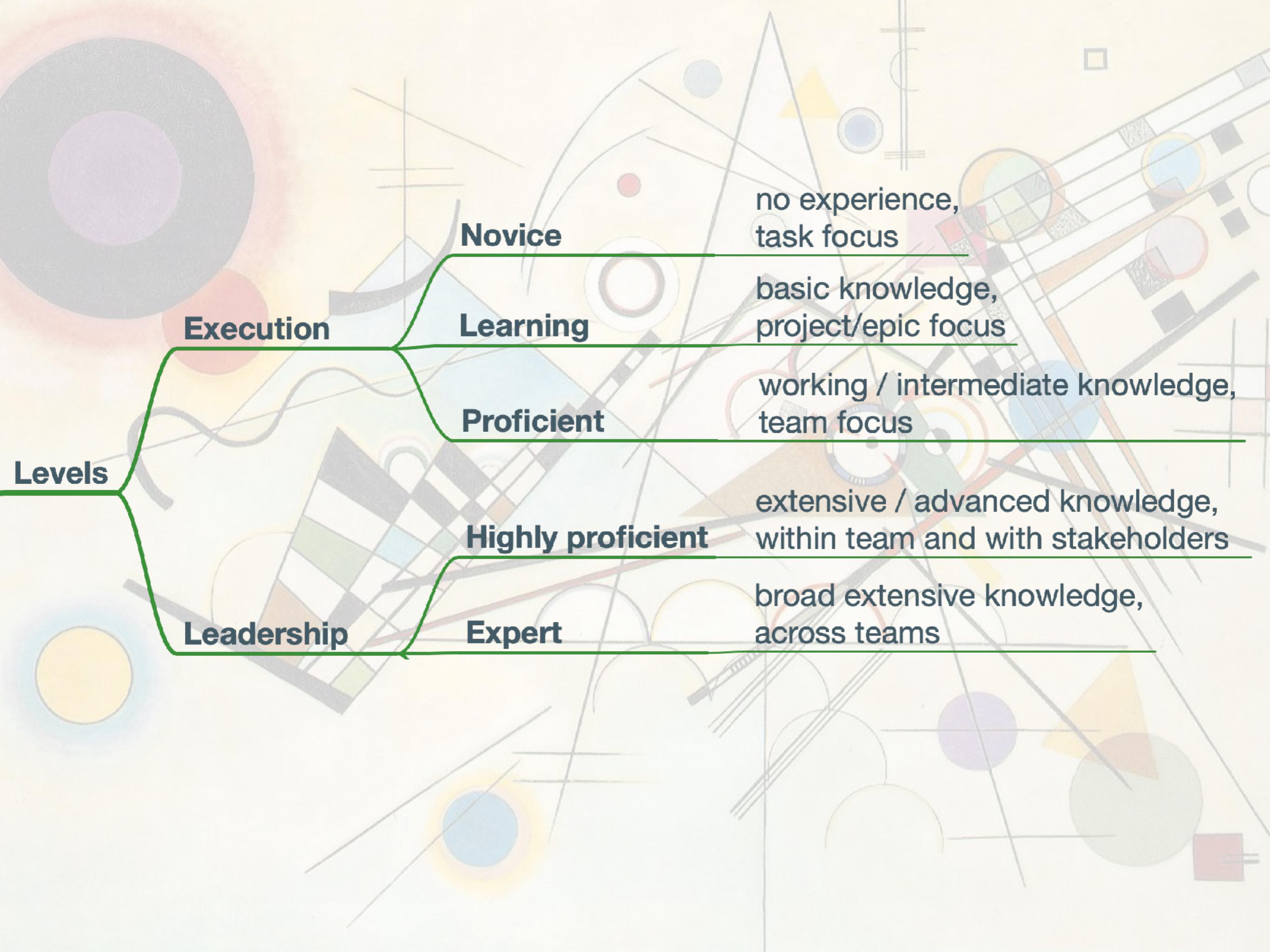
Levels

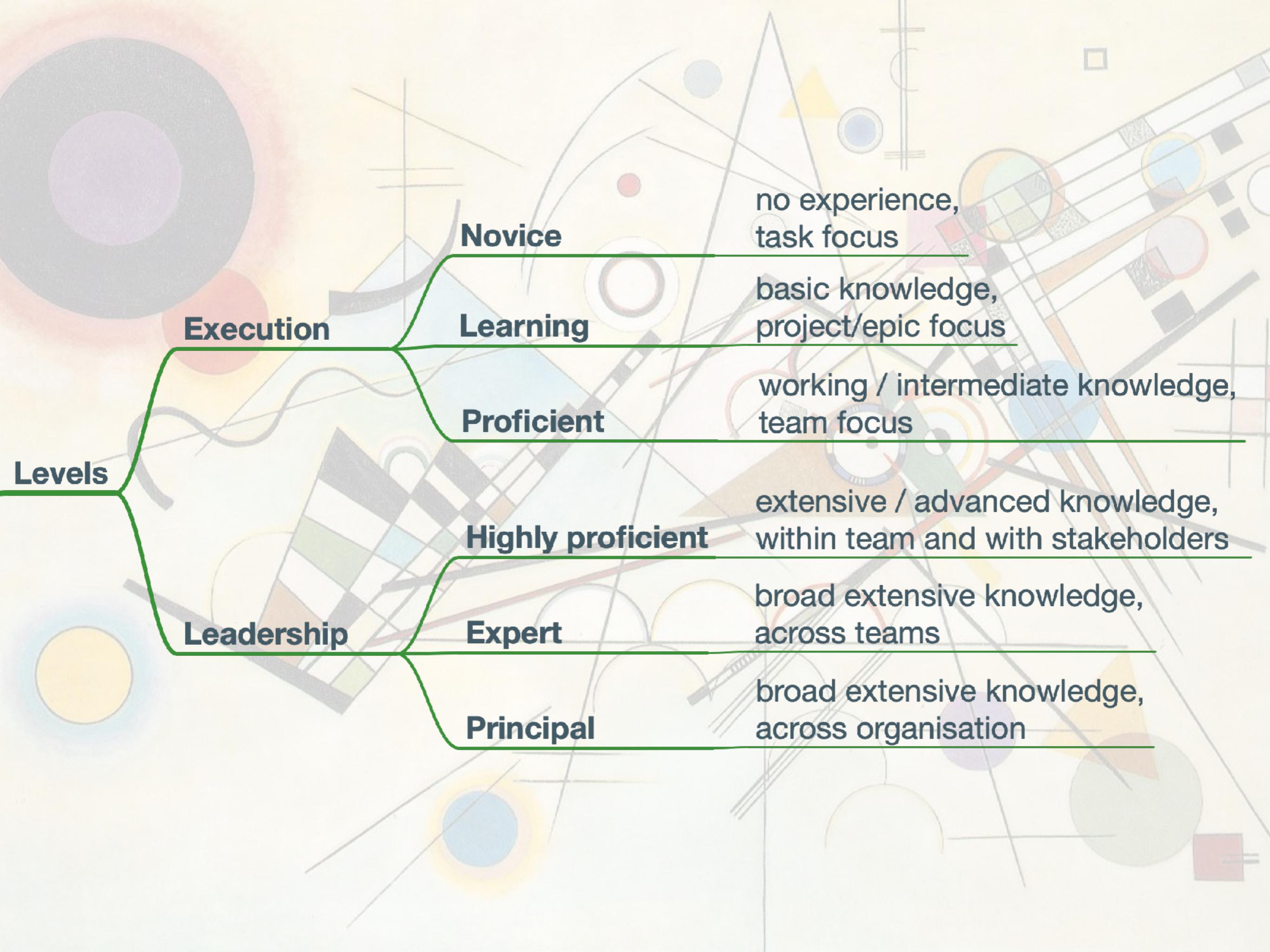
Leadership













“Hard” Skills

Data Engineering and wrangling
Software Engineering
Math / Stats / Alg
Data Visualisation
DevOps & Security
Domain / Business Knowledge

Data Engineering and wrangling

Data Modeling

Data Validation

ETL

Map Reduce

Streaming Data ETL

User and load
management

Software Engineering

Writing code

Debugging

Testing

Observability

Understanding code

Architecture







Data Visualisation

Exploratory
Visualisation

Explanatory
Visualisation

Storytelling

D3

Typography

Color Theory

Visual Design

Interactive Design



DevOps & Security

Cloud Deployment
Continuous Integration
Infrastructure as Code
Information Security
Threat Monitoring

KPI design

Identifying business problems and opportunities

Transforming business problems and opportunities into data problems

Economics

Marketing

Business Models

Finance

Sales

Purchasing

Customer Support

Organisational Structure

HR

Product

Market Research

Domain/Market Specific Knowledge

PR

B2B, B2C

Subscription / Micro-payments / Service Provider / eCommerce / etc.

Enterprises / Star-ups

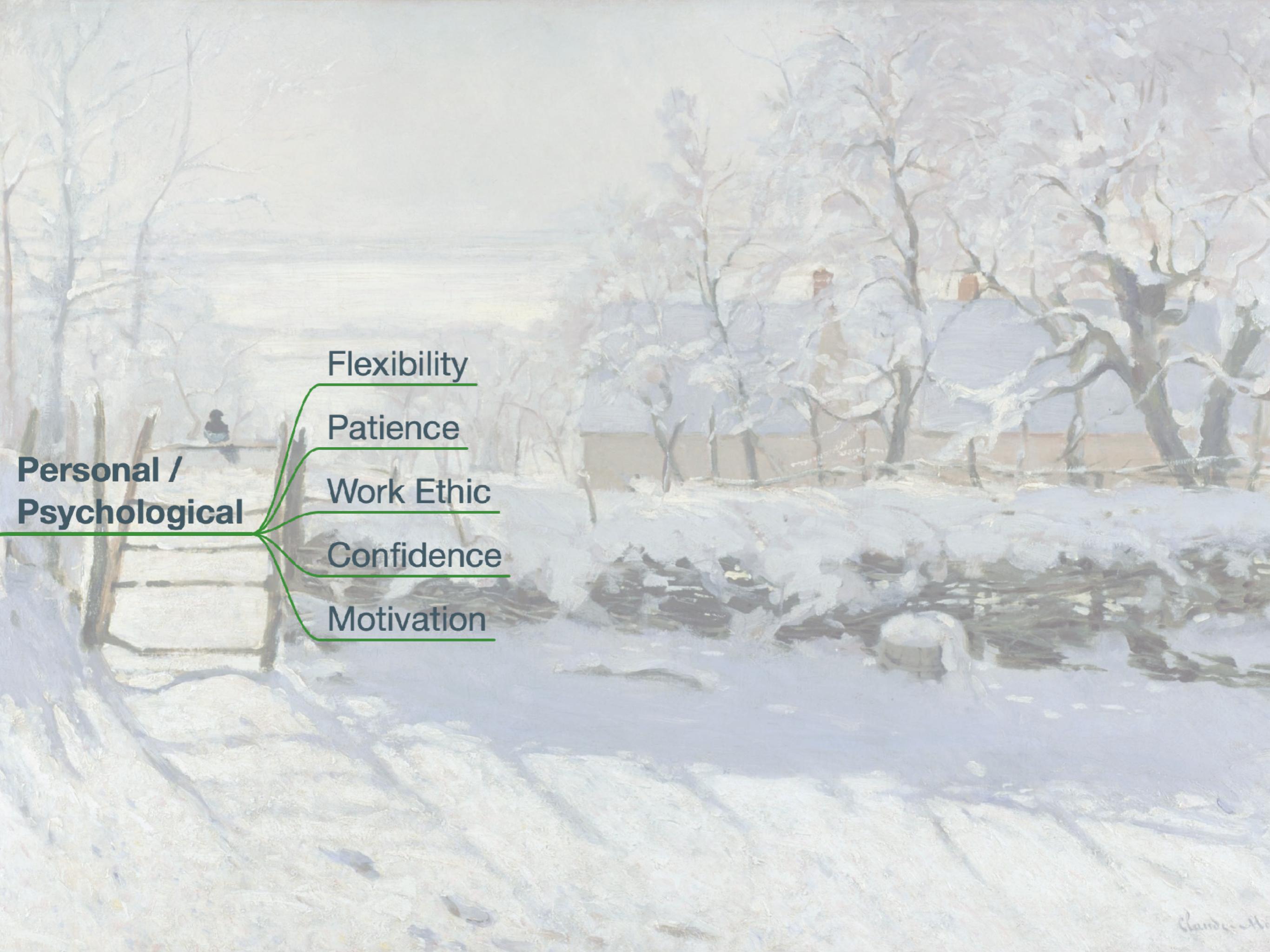
Functional / Cross functional

Remote / Distributed / Single location



“Soft” Skills

Personal / Psychological
Feedback, Communication, Collaboration
Delivery
Project Management
Leadership
Strategy



**Personal /
Psychological**

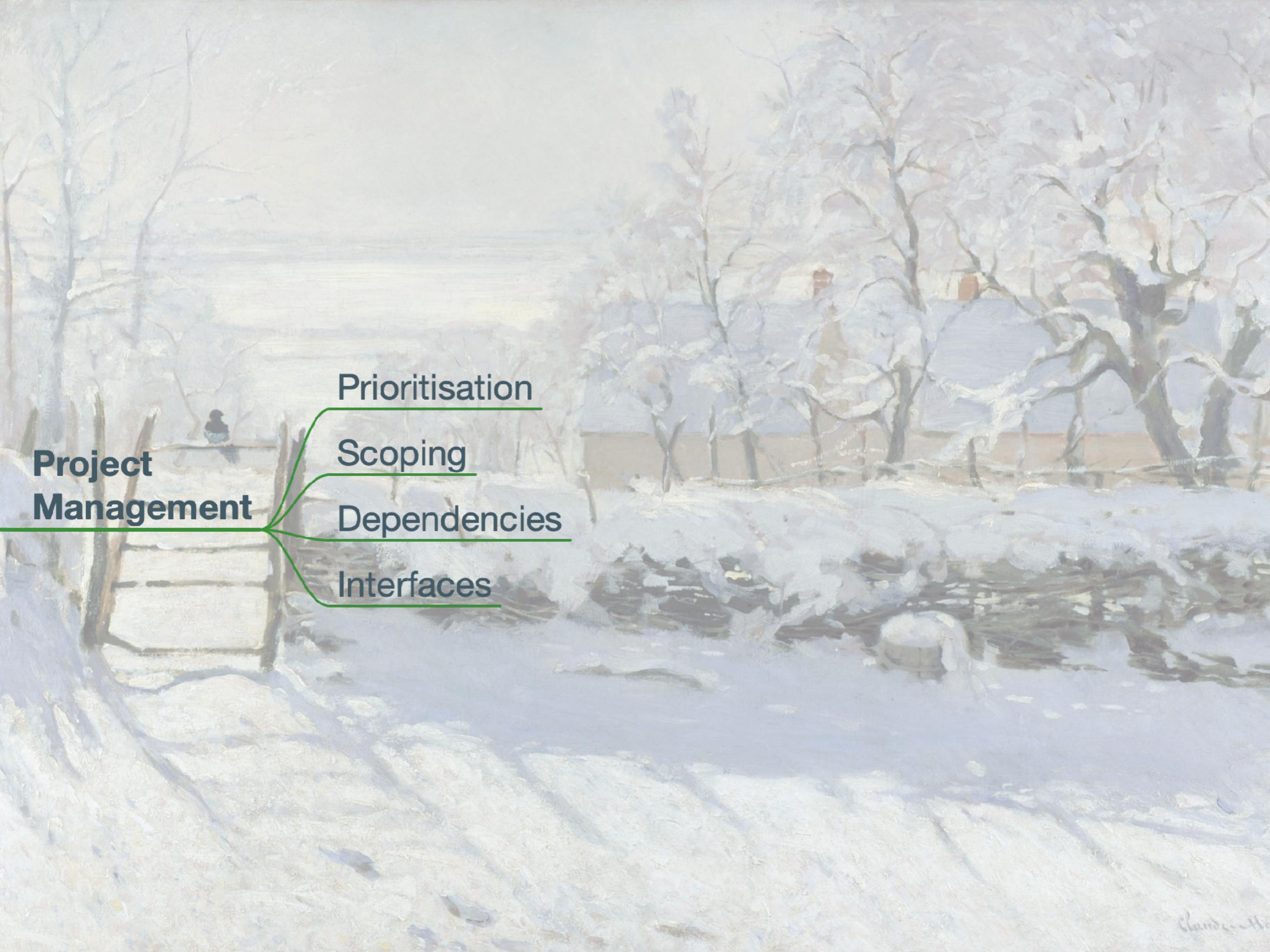
Flexibility
Patience
Work Ethic
Confidence
Motivation



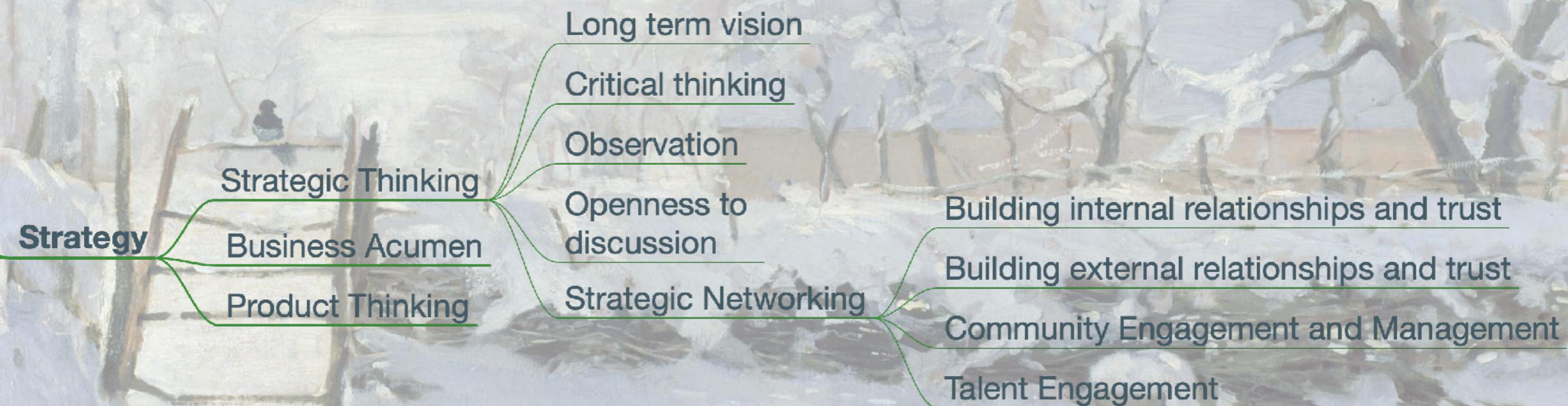
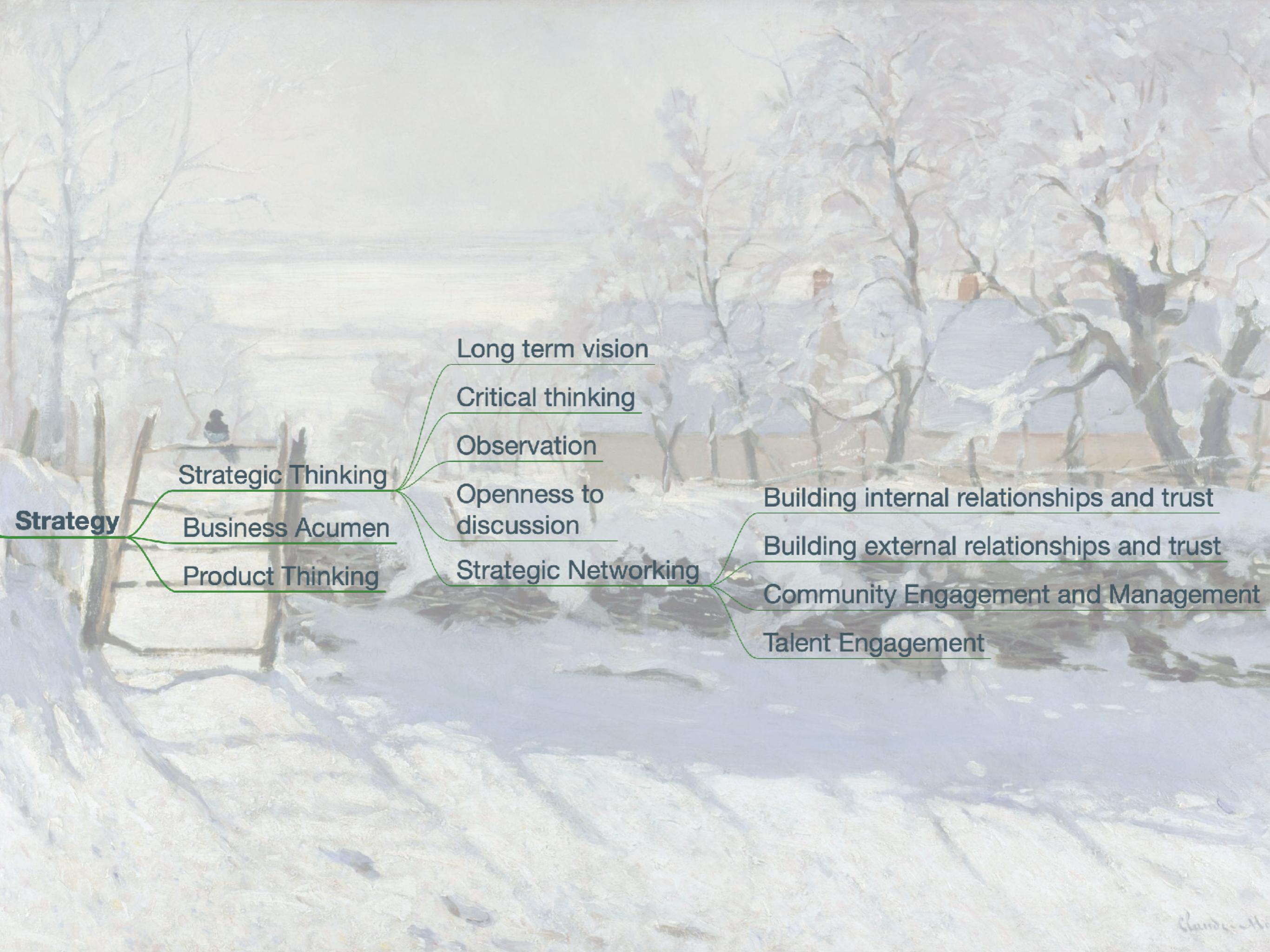


Project Management

Prioritisation
Scoping
Dependencies
Interfaces





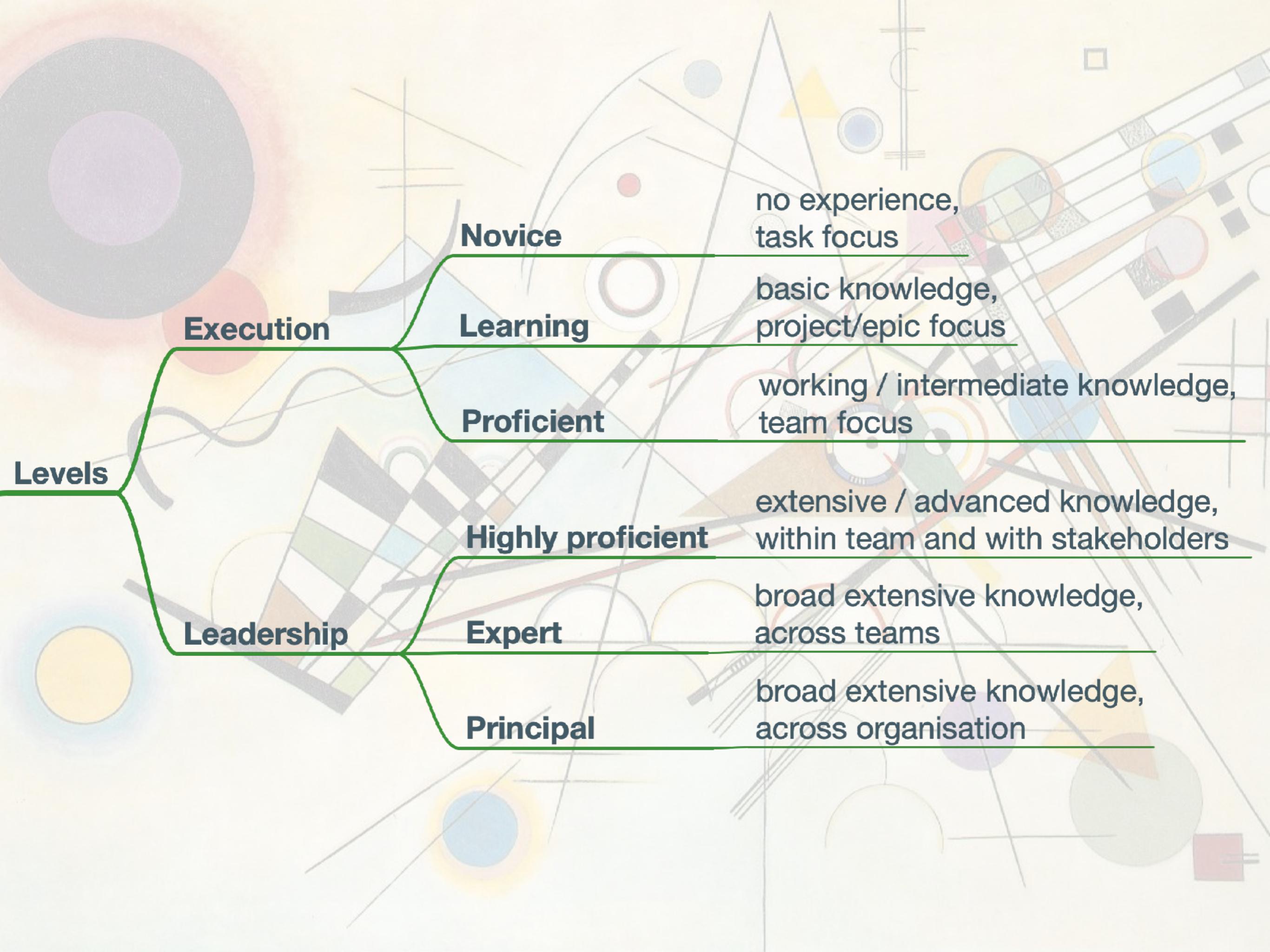


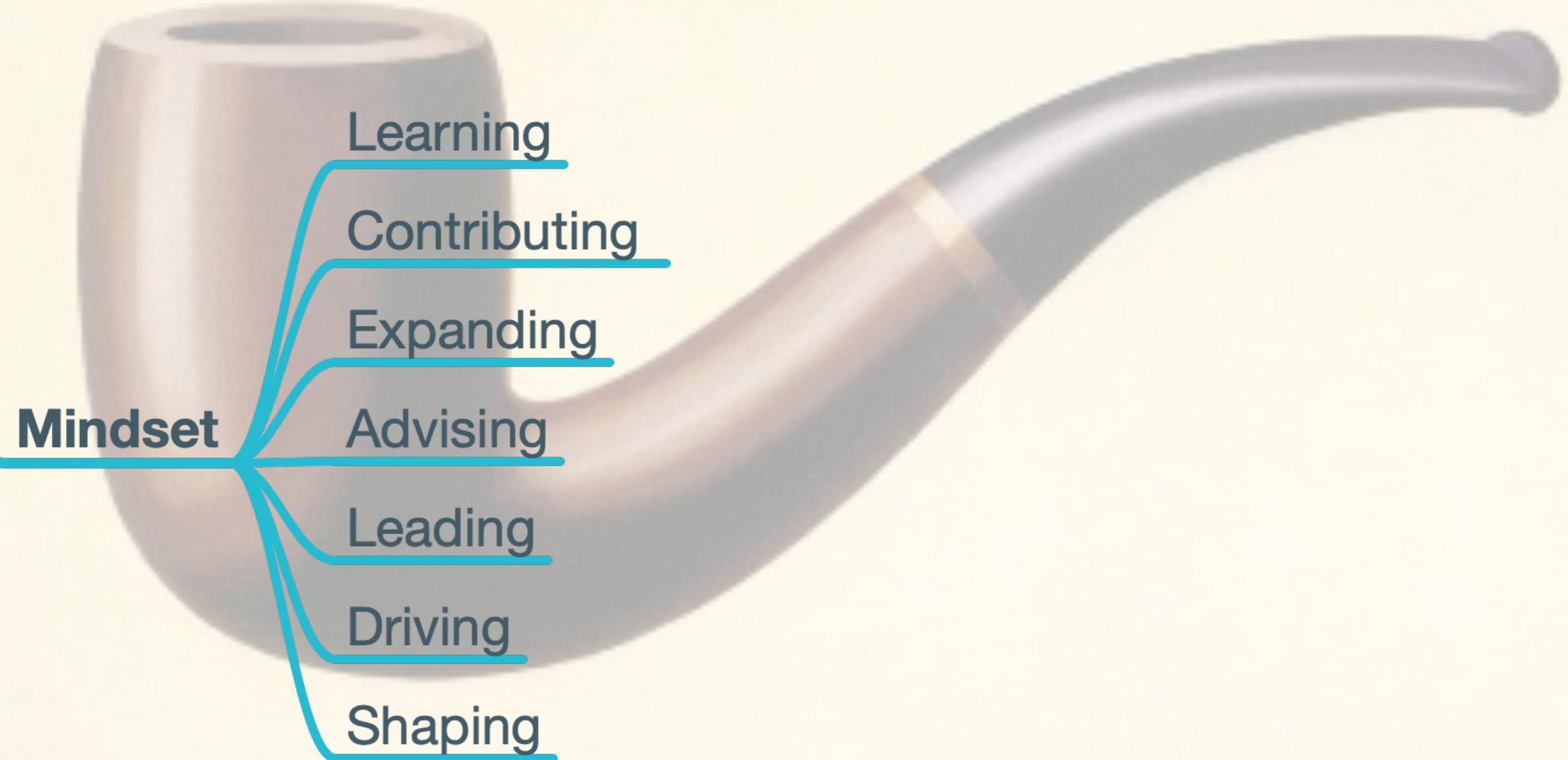


Mindset

Let's get personal

Ceci n'est pas une pipe.



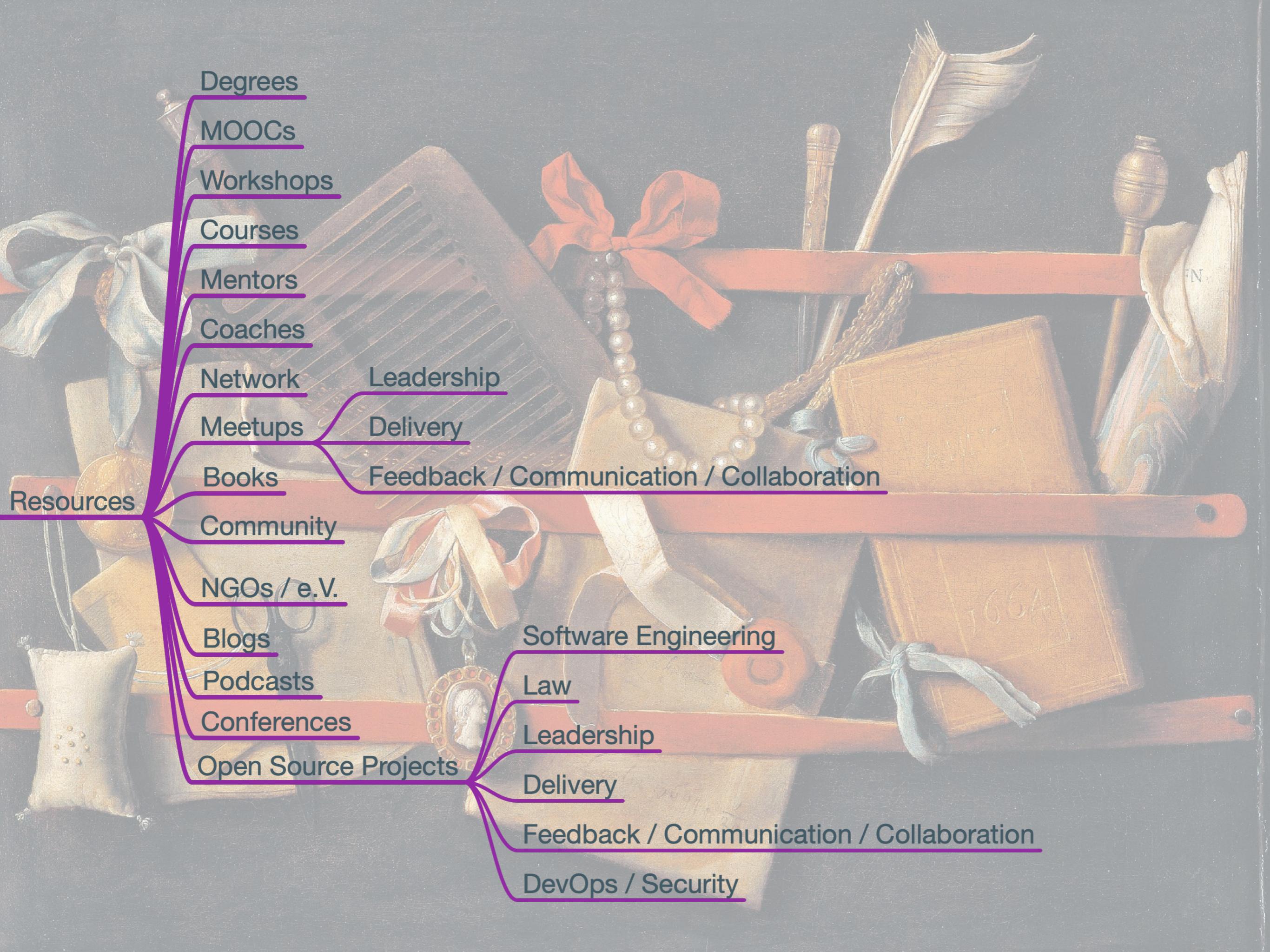


Ceci n'est pas une pipe.

A detailed still life painting on a dark background. It includes a large open book with a red ribbon, a quill pen, a compass, a telescope, a small globe, a pair of spectacles, a gold medal, and several smaller items like beads and a small pouch.

Resources

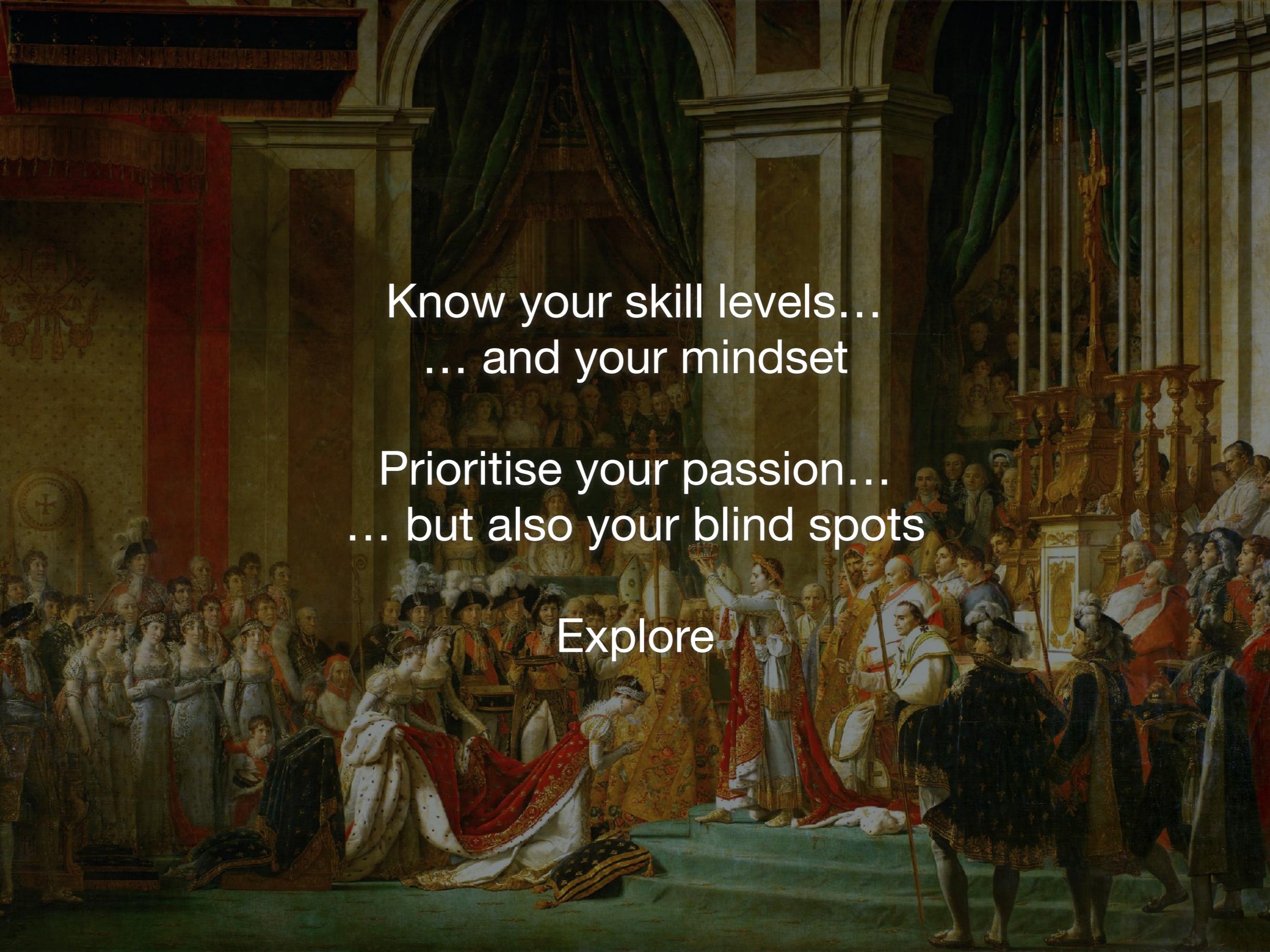
On-the-job
Provided by work
Independant
Community
Open Source



In Practice

How do I use all of these?





Know your skill levels...
... and your mindset

Prioritise your passion...
... but also your blind spots

Explore

Career Tracks
Skills: Levels, “Hard”, “Soft”
Mindset
Resources
In Practice

Thank You

[https://github.com/noatamir/Talks/blob/master/
PyConDE2019-DSCareer-Grow.pdf](https://github.com/noatamir/Talks/blob/master/PyConDE2019-DSCareer-Grow.pdf)