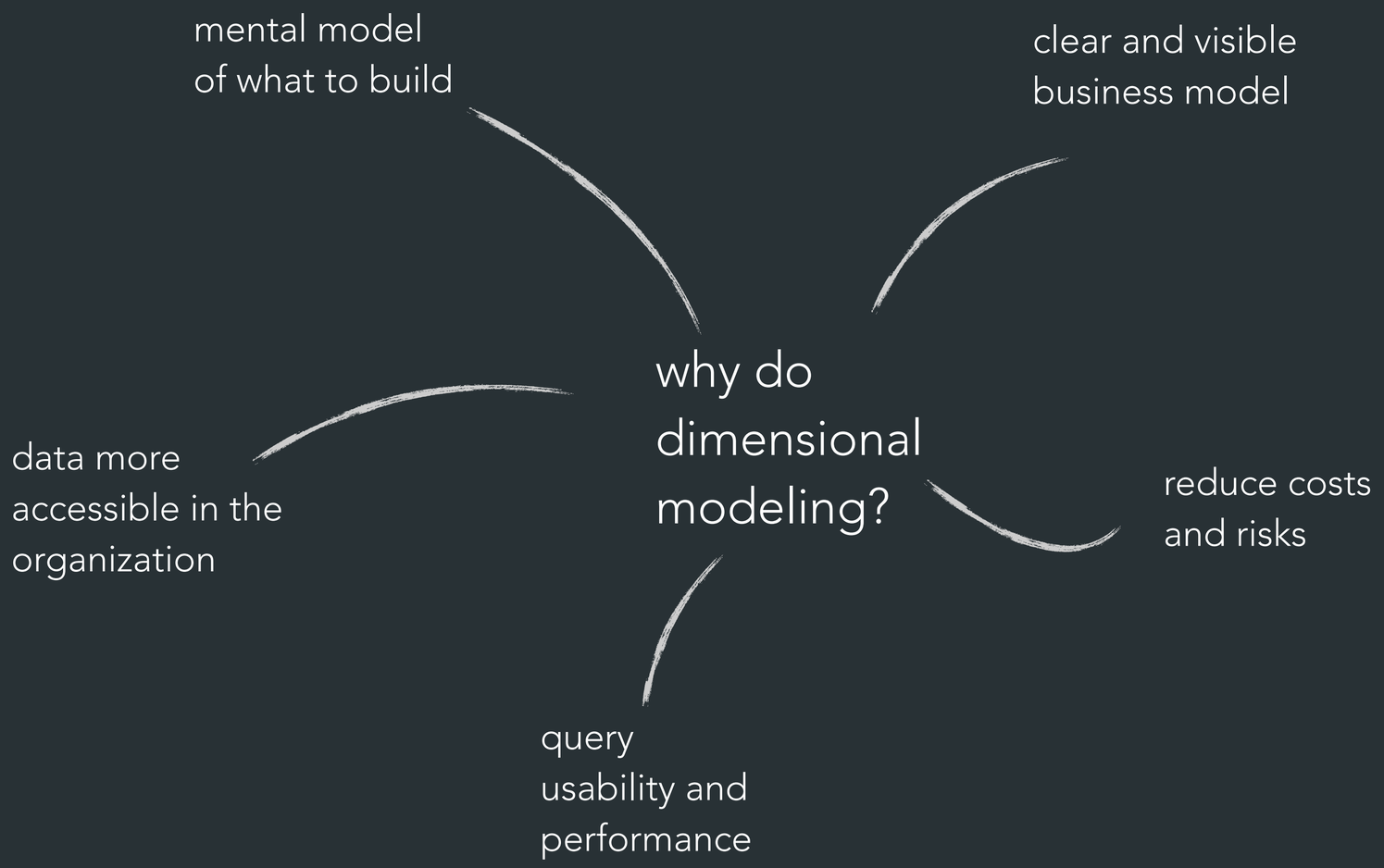
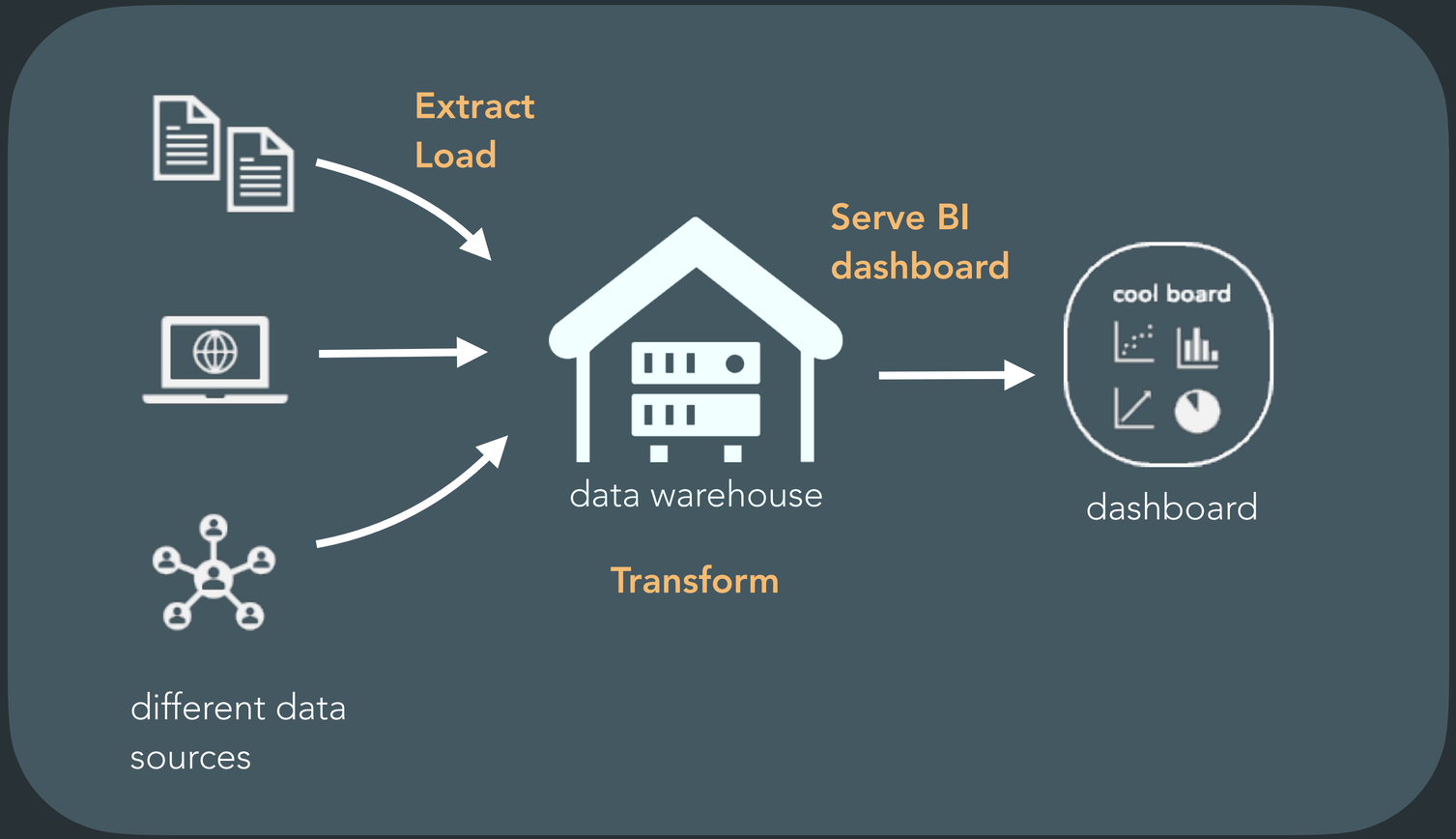
kokchun giang

using **dimensional modeling** to align the data warehouse to the business

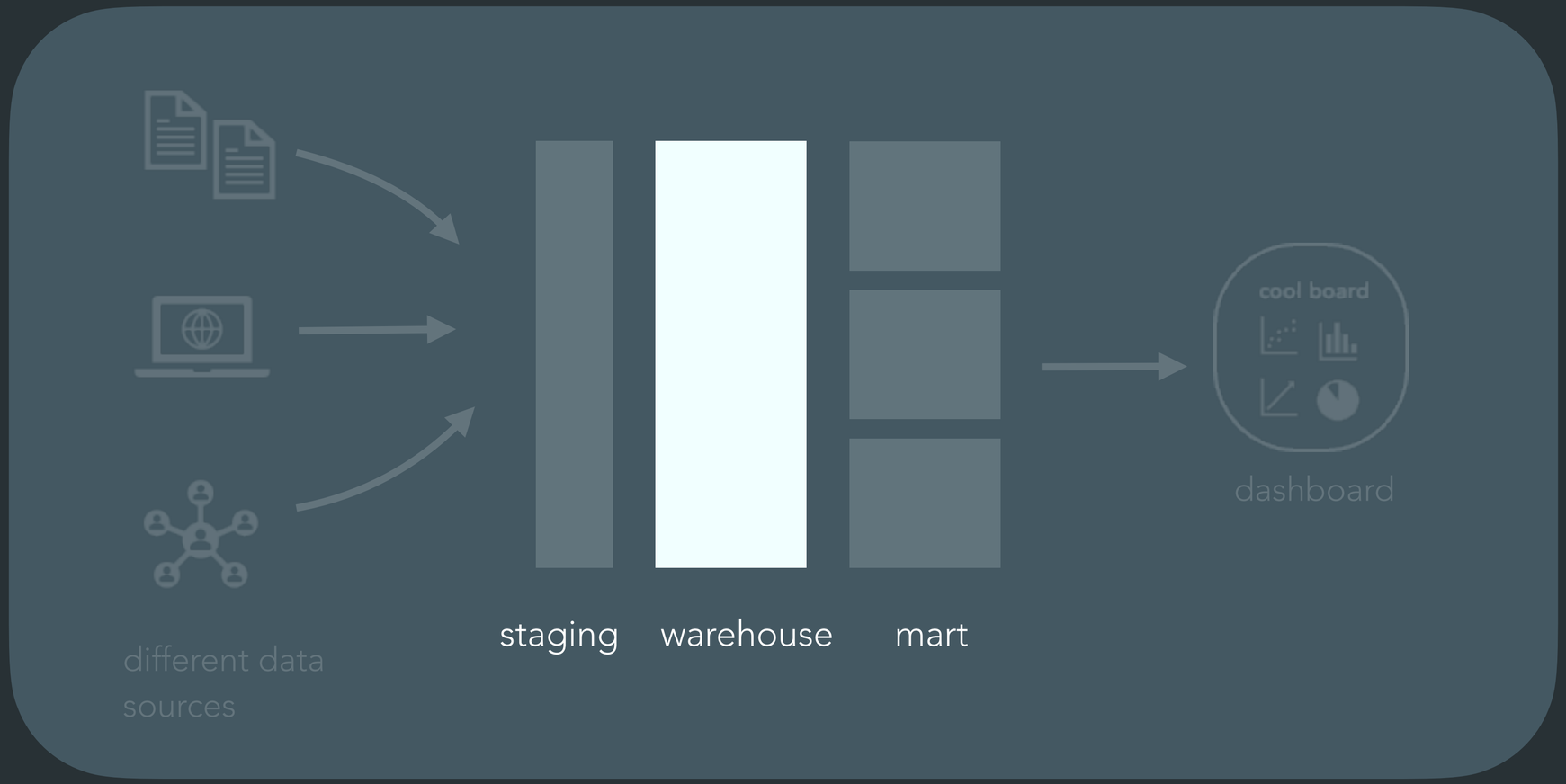

mental model
of what to build
clear and visible
business model
why do
dimensional
modeling?
data more
accessible in the
organization
reduce costs
and risks
query
usability and
performance

remember the **data pipeline** in this course

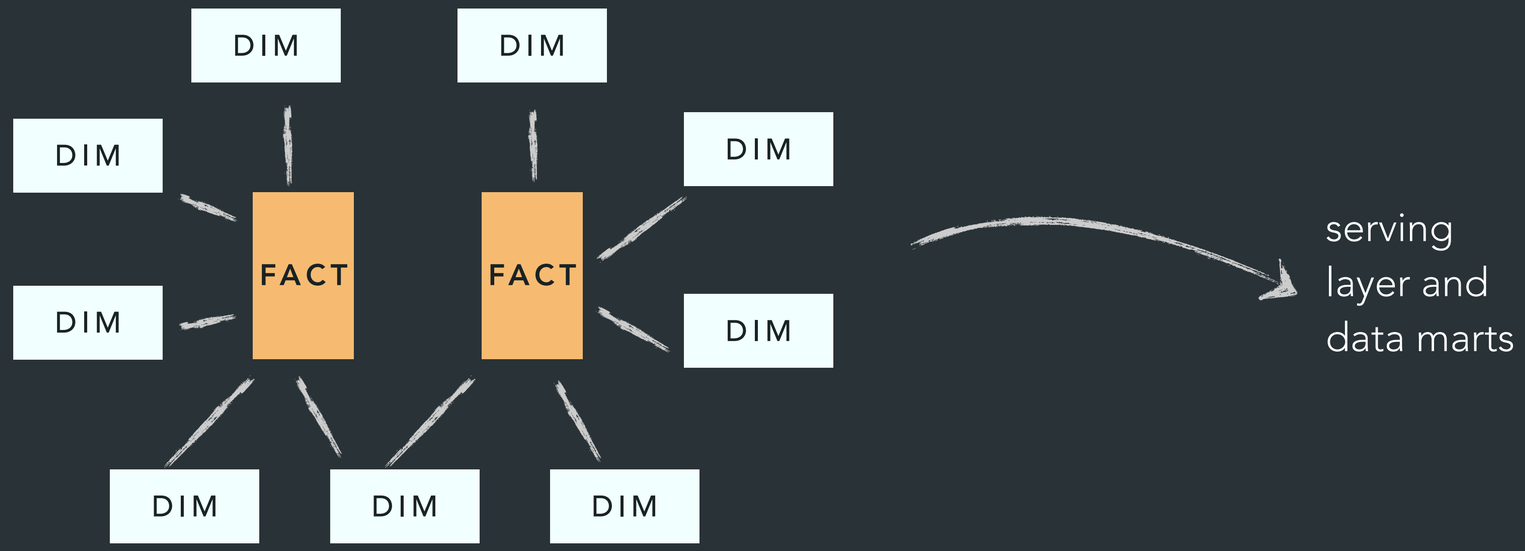


we’ll now focus on **data warehouse** part

more specifically **warehouse layer**



model the warehouse layer as **star schemas**



4 steps of dimensional modeling

1. find the business process 

2. define the grain 

3. identify the dimensions 

4. identify facts 

find out **business process** to model

activities to achieve specific organizational goals

example

retail sales
store inventory
warehouse inventory
retail promotion tracking
retail sales forecast
receive warehouse deliveries

when starting: pick a
business critical process and
a feasible process in terms
of data availability, quality

the more **granular**, the better - sales example

more granular

more aggregated

	each row represents
transactional grain	single sale
daily grain	daily sale
monthly grain	total sale at monthly level

low grain of a fact is much easier to join to different dimensions, making it better at meeting various business requirements

dimensions - example healthcare

dimensions are descriptive attributes that provide
context for the facts,

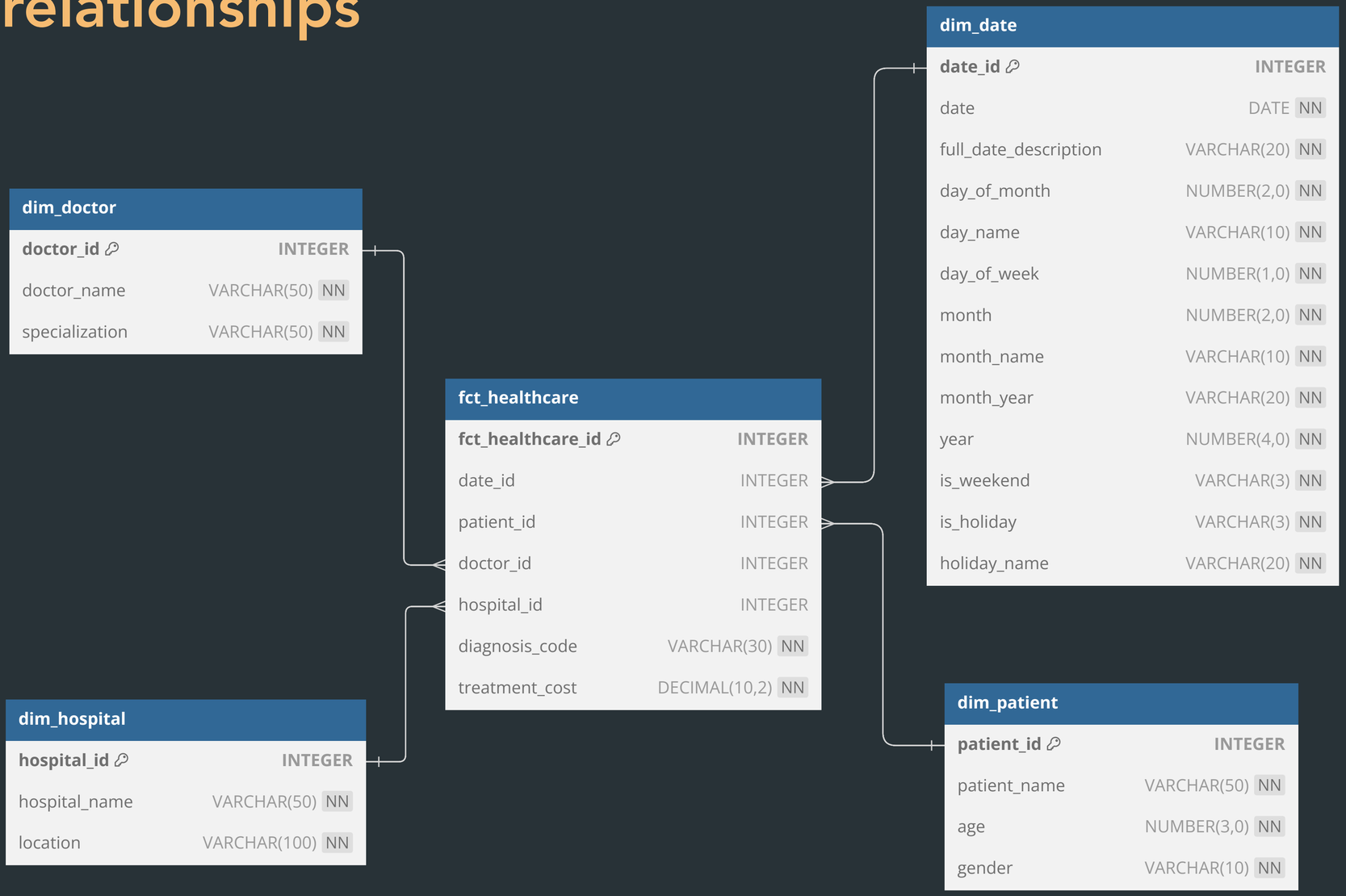
dimension tables	description
date	day, month, quarter, year
patient	patient id, patient name, age, gender
doctor	doctor id, doctor name, specialization
hospital	hospital id, hospital name, location

facts - example healthcare

quantitative data points for measurable events or transactions in a business process stored in **fact table**

fact column	**description**
patient visits	number of patient visits
diagnosis code	code representing diagnosis
treatment cost	cost of treatment in SEK

fact and dimension tables linked through **foreign-key relationships**



star schema of the hospital example