HighLoad++ · May 18, 2021

What a CTO is, from startup to IPO

The organizational lifecycle and the role of the technical director

Audience For whom

For anyone who has asked three questions

Who this talk is for

- What does a career in IT actually look like?
- Is it worth growing into a team lead and beyond?
- How do you do it right?

Walking the company lifecycle and finding the CTO on it

What we'll cover

- The characteristics of each lifecycle stage
- The CTO's role at every stage
- Examples from real life
- CTO levels and what each transition takes

Part 1

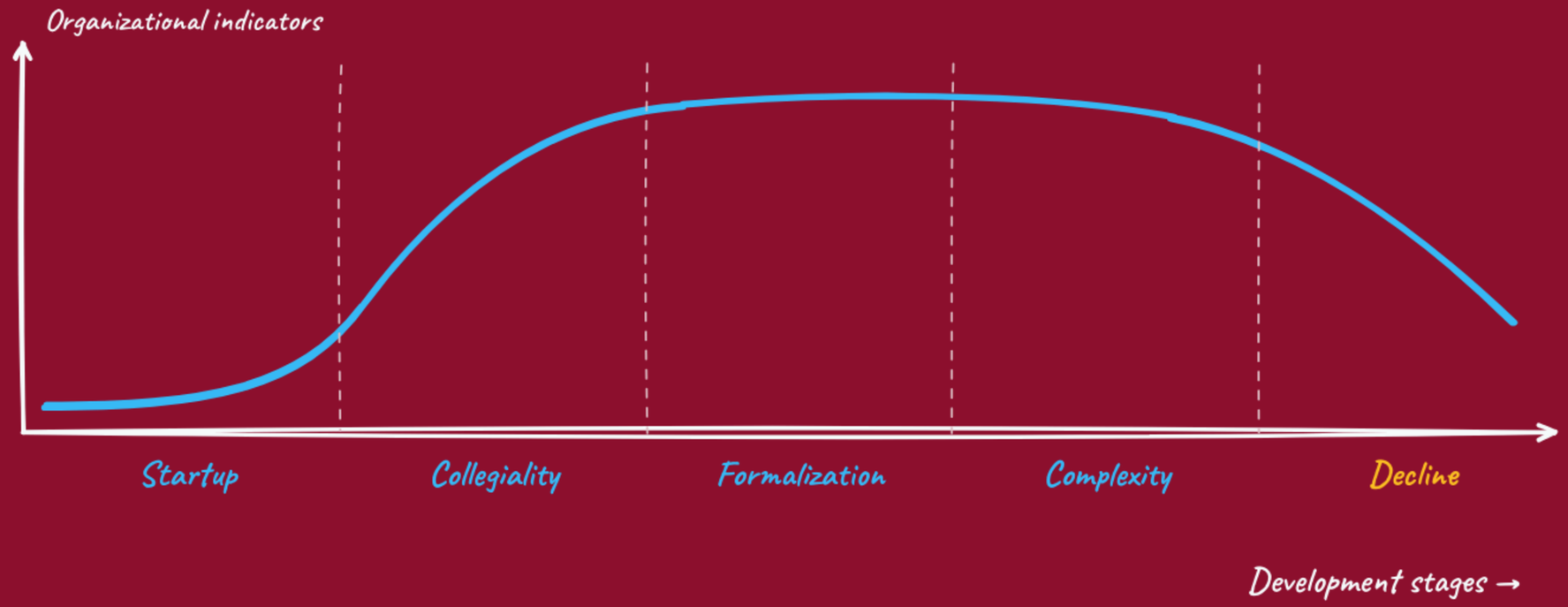
01

The organizational lifecycle

Startup → Growth → Maturity → Decline

Organizations pass through five development stages

S-curve 5 stages



Part 2

02

Startup

The startup stage

Startup Stage 1

At a startup the CTO is a Startup Coder

Unclear goals and high creative freedom

- The steps: idea → MVP → funding
- At every step business and engineering move together
- Characteristics: unclear goals
- And high creative freedom

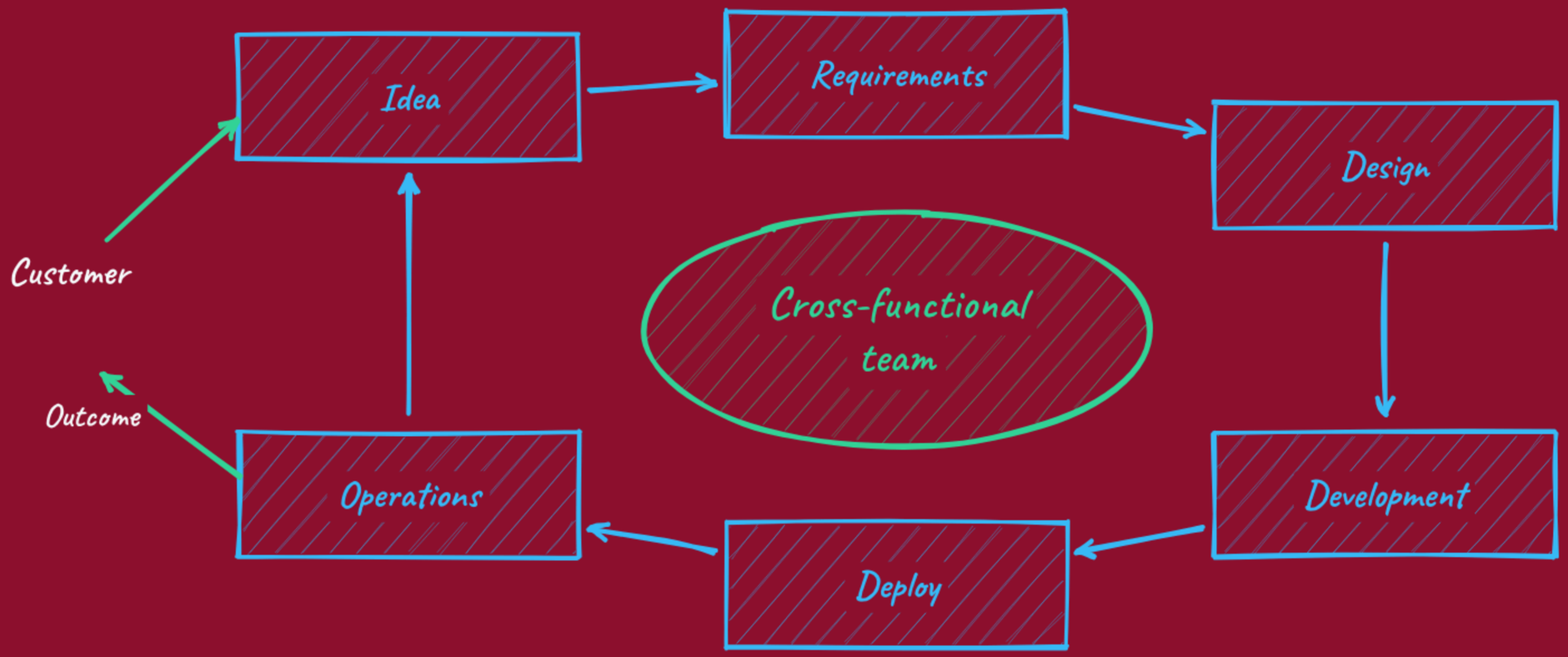
Part 3

03

Growth

The collegiality stage

The team is the unit of scaling



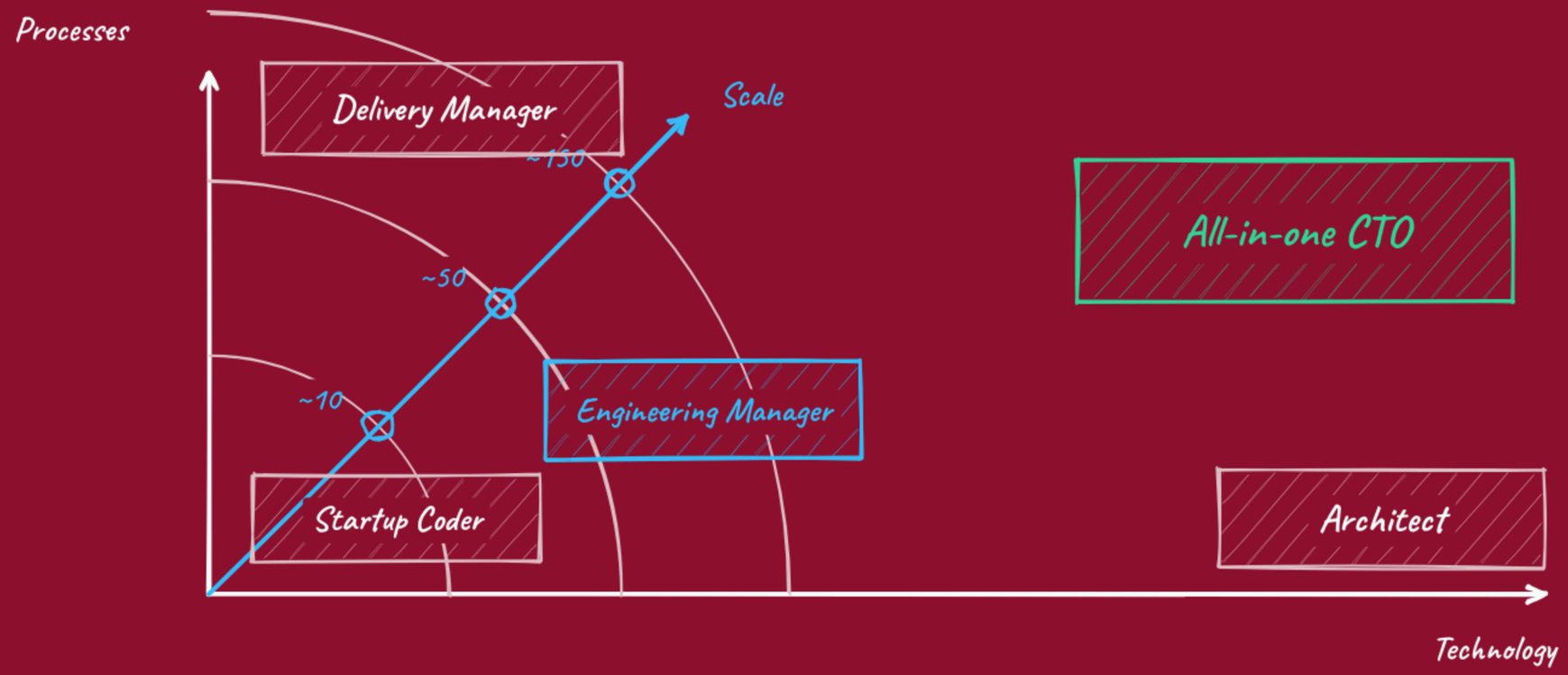
Growth Stage 2

During growth the CTO becomes an Engineering Manager

The collegiality stage

- Defining the mission and the growth strategy
- Informal communication and structure
- High commitment
- Roughly fifty people by scale

The CTO role moves along three axes



Part 4

04

Maturity

Formalization, then growing complexity

Formalization is where the All-in-One CTO appears

Maturity Stage 3

Formalizing structure and management

- Growth stabilizes
- Roles and rules get formalized
- The structure stabilizes
- The emphasis shifts to efficiency

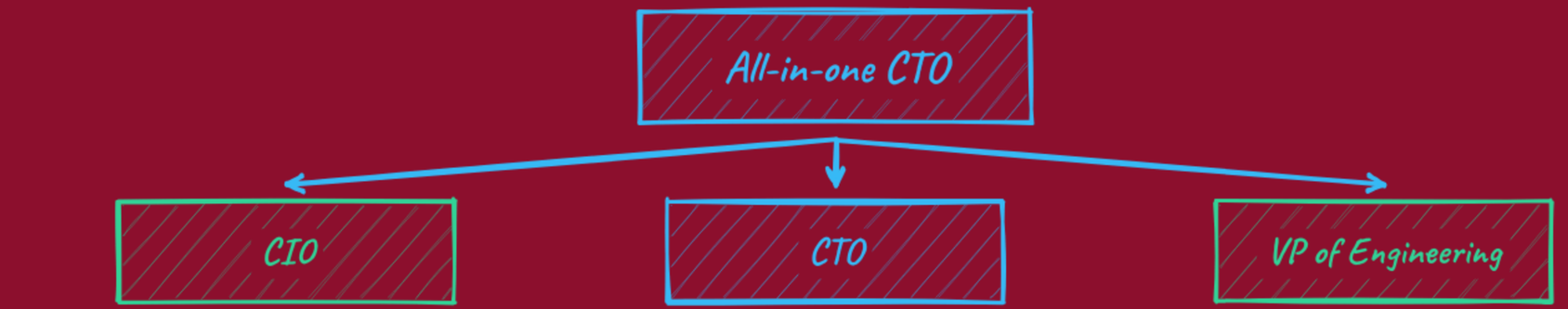
What this looked like at the Tinkoff group

Example Banking

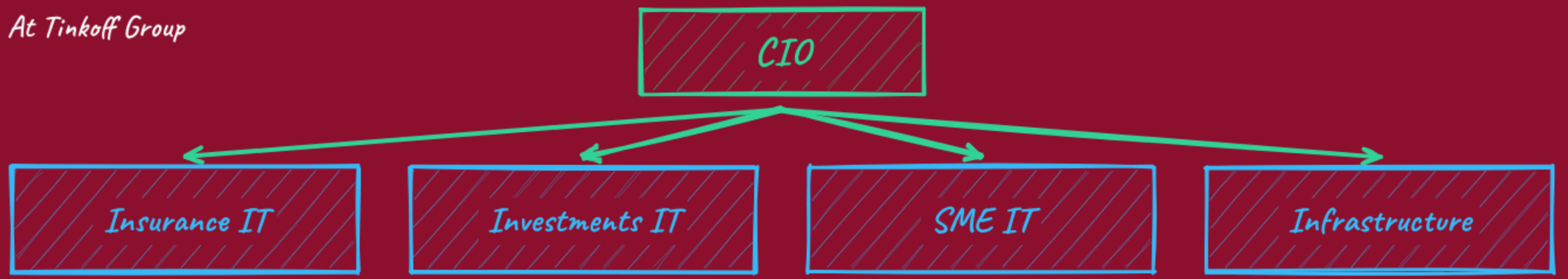
An example from banking

- From a monoline bank to an ecosystem — per the «Bank 4.0» book
- 2007–2020: Tinkoff Black, mobile bank, investments, a mobile operator
- Business verticals: retail, business, investments, insurance, travel
- And platforms on top of the infrastructure

Complexity splits one role into three



At Tinkoff Group



Each vertical: CTO + Head of delivery

Part 5

05

Decline

The decline stage

Decline is four symptoms

Decline Stage 5

The talk assigns no new CTO role here

- Revenue falls
- Employee turnover rises
- Conflicts build up
- Management centralizes

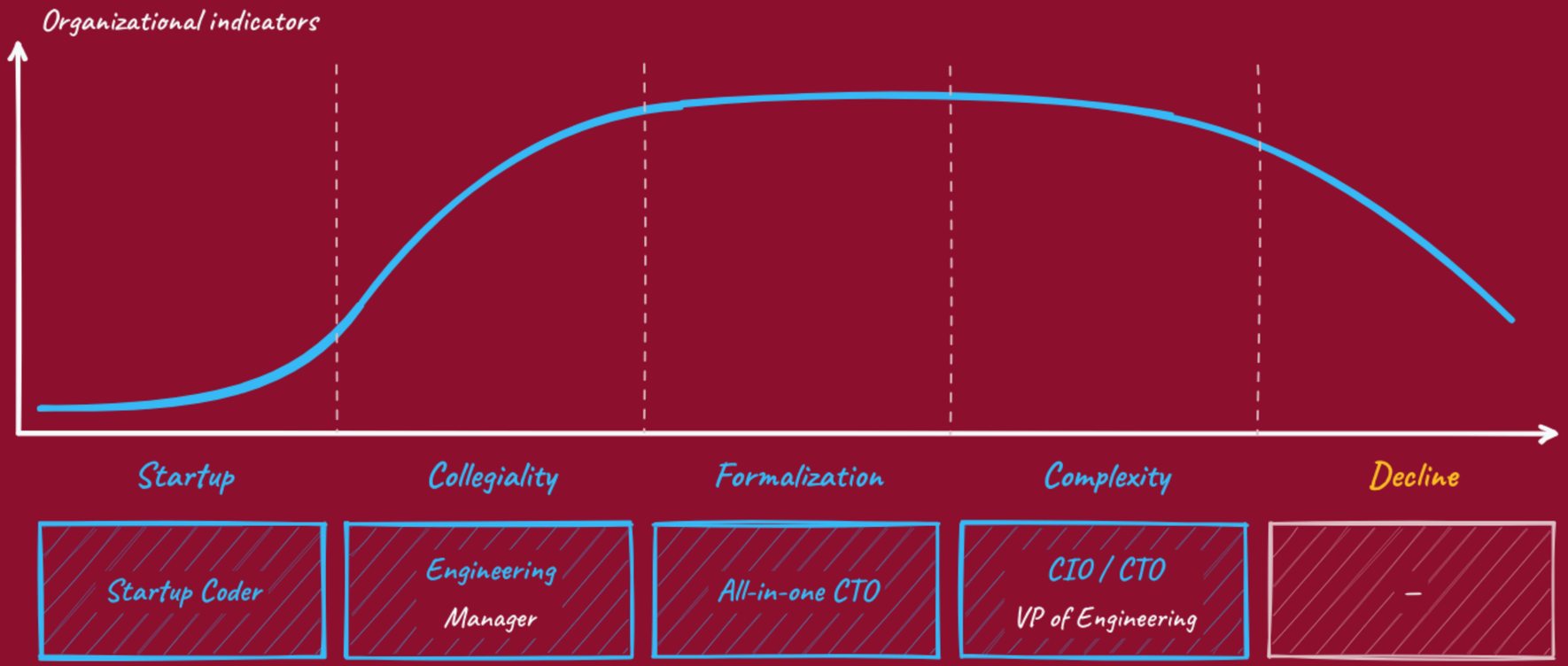
Part 6

06

Putting it all together

CTO levels and the transitions between them

The development stage shapes the CTO role



The CTO level follows the company stage, not the title

What to take with you

- Every stage has its own CTO role
- The unit of scaling is a team, not a person
- Delivery manager and Architect are axes, not rungs
- Every transition means pulling up the weaker axis

Further reading Sources

What to read next

The sources from the talk’s closing slide

- «Team Topologies» and «Technology Strategy Patterns»
- «The Art of Leadership: Small Things, Done Well»
- «Digital Transformation Game Plan» and «Bank 4.0»
- Articles on the org lifecycle and the CIO/CTO/VP roles

polomodov.tech

Thank you!

All slides and links are in the Telegram channel

Alexander Polomodov

Technical Director & Fellow,
T-Technologies



@book_cube