

TECH COURSE

Emerging Technologies — Full Course

Every topic explained, from basics to best practice

Presenter Name · 4 · 2026



Course map

01 Internet of Things (IoT)

02 Generative AI at Work

03 Cloud Computing 101

04 Blockchain Explained



Image

INTERNET OF THINGS (IOT)

04



Connected devices that sense, think and act

Module 1 · Internet of Things (IoT)

Overview

- IoT connects sensors and devices to the internet
- Data from devices drives automation and insight
- Used in homes, farms, factories and cities
- Security and power are key design challenges

KEY IDEA

Design for low power and secure updates from day one.

How it works



Sense

Sensors measure the world



Connect

Wi-Fi, BLE, LoRa or cellular



Analyse

Edge or cloud processing



Act

Alerts and automatic control

Core components

1

Devices

Sensors and actuators.

2

Connectivity

Networks and protocols.

3

Platform

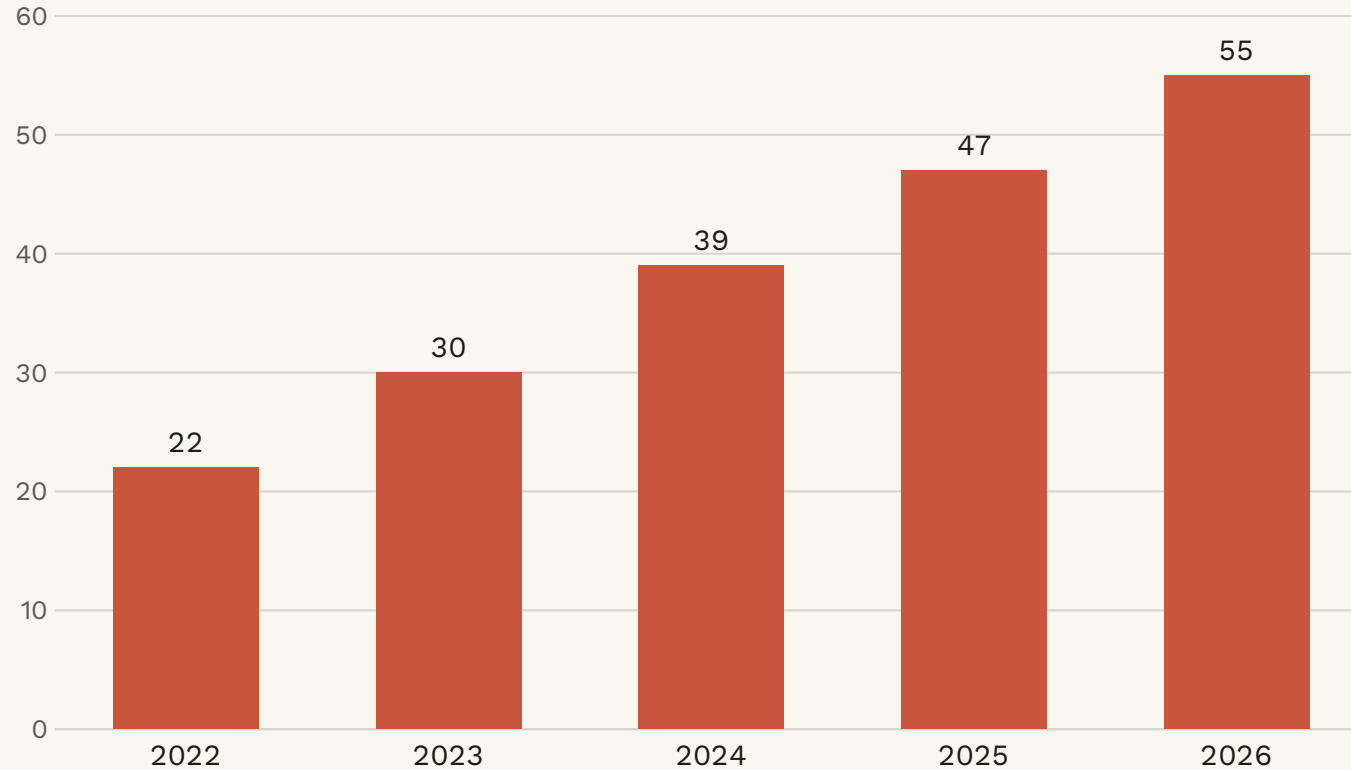
Data, dashboards and rules.

Tools and options

Layer	Popular choices	Notes
Boards	ESP32, Raspberry Pi	Cheap prototyping
Protocols	MQTT, HTTP, CoAP	Lightweight messaging
Platforms	Dashboards and rules engines	Start with open source

Generic examples; pick what fits your project.

Adoption over time



Adoption keeps rising as tools mature (sample data).

Sample data for illustration — replace with your own figures.

Use cases



Image 1

Smart agriculture

Soil and weather sensing



Image 2

Smart homes

Lights, locks and energy



Image 3

Industry

Predictive maintenance

Benefits and risks

Benefits

- ✓ Real-time visibility
- ✓ Automation saves cost
- ✓ New services possible

Risks

- Security vulnerabilities
- Battery and power limits
- Interoperability gaps

Best practices

1

Secure by default

Unique credentials per device.

2

Plan updates

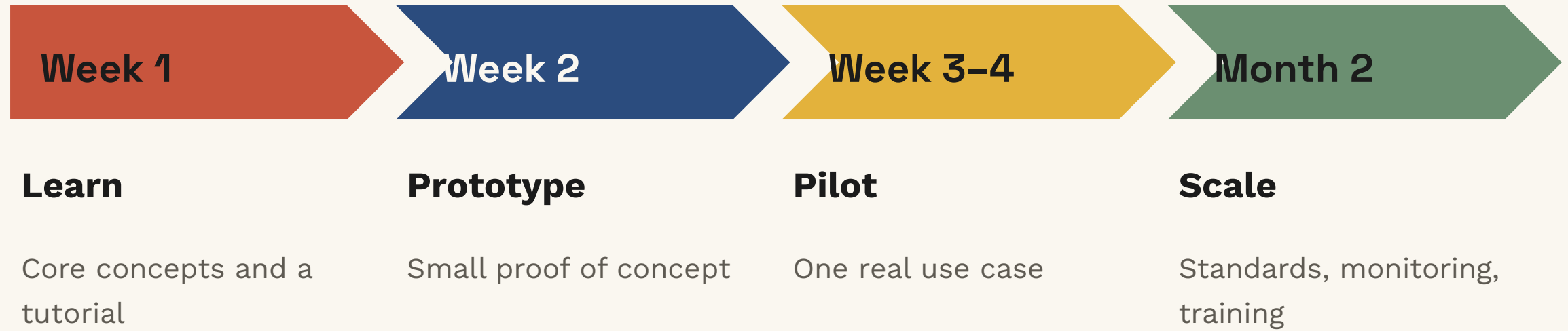
Over-the-air firmware.

3

Collect less

Only the data you need.

Getting started roadmap



GENERATIVE AI AT WORK

02



What it is, how it works and how to use it responsibly

Module 2 • Generative AI at Work

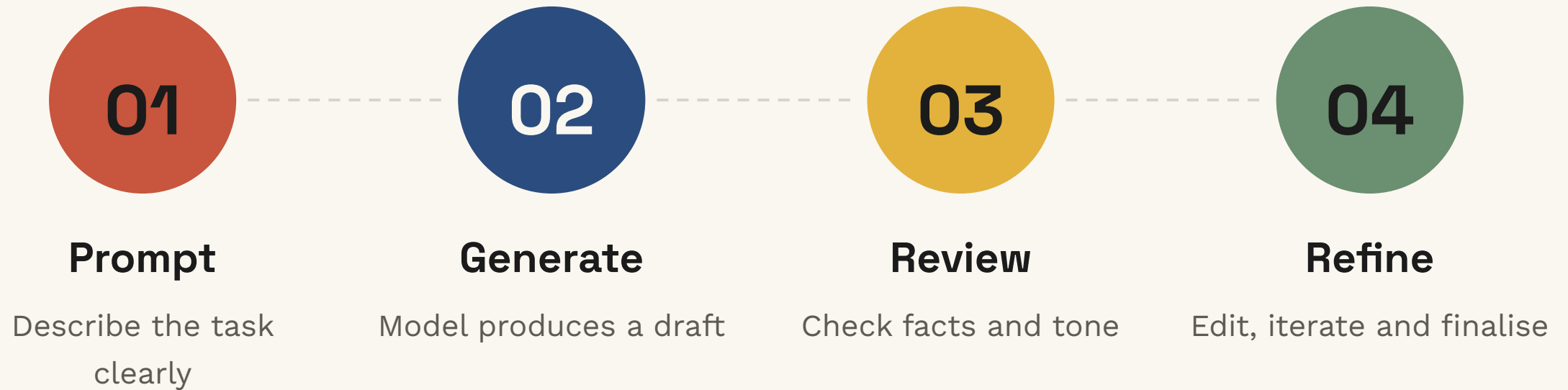
Overview

- Generative AI creates text, images, code and audio from prompts
- It is trained on large datasets to predict likely outputs
- Teams use it for drafting, summarising and ideation
- Quality, privacy and accuracy still need human review

KEY IDEA

Treat AI output as a first draft, not a final answer.

How it works



Core components

1

Models

Large language and image models.

2

Data

Your documents and knowledge base.

3

Guardrails

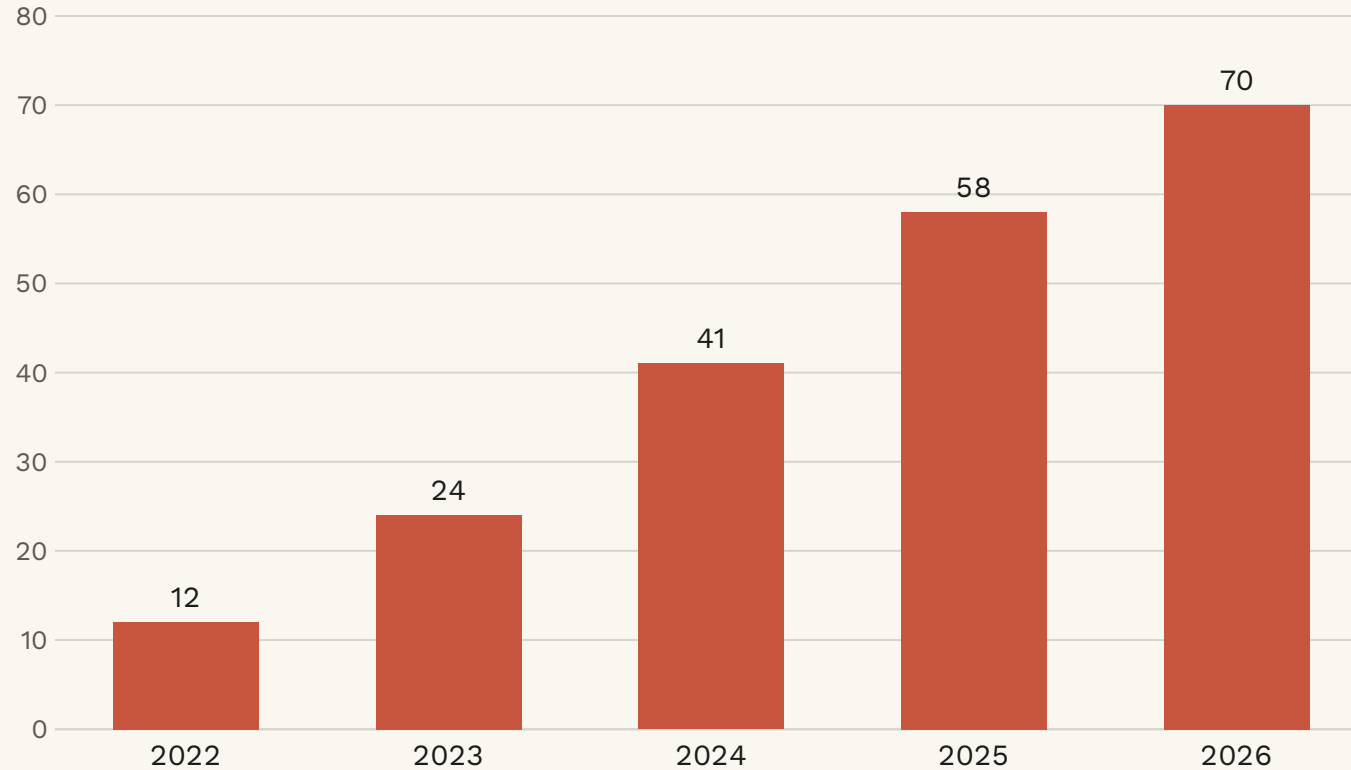
Policies, filters and review steps.

Tools and options

Layer	Popular choices	Notes
Models	Hosted APIs, open models	Compare cost and privacy
Retrieval	Vector databases	Ground answers in your data
Apps	Chat, plugins, agents	Start with one workflow

Generic examples; pick what fits your project.

Adoption over time



Adoption keeps rising as tools mature (sample data).

Sample data for illustration — replace with your own figures.

Use cases



Image 1

Customer support

Draft replies and summaries



Image 2

Marketing

Copy variations and ideas



Image 3

Engineering

Code suggestions and tests

Benefits and risks

Benefits

- ✓ Faster first drafts
- ✓ Scales knowledge work
- ✓ Helps non-experts start

Risks

- Can be confidently wrong
- Privacy and IP concerns
- Over-reliance risk

Best practices

1

Be specific

Give context, examples and format.

2

Verify

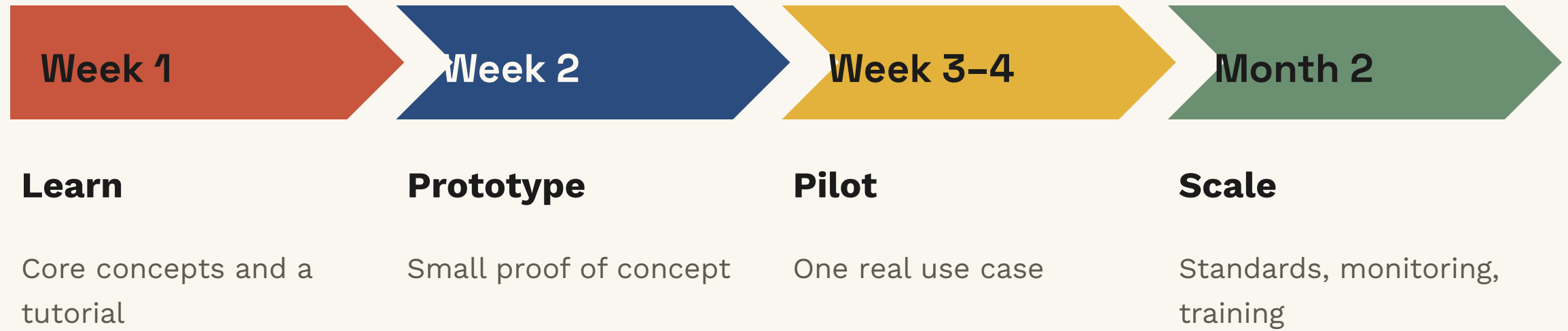
Check facts before publishing.

3

Protect data

Never paste confidential data into unknown tools.

Getting started roadmap



CLOUD COMPUTING

101

03



From servers in a room to services on demand

Module 3 • Cloud Computing 101

Overview

- Cloud computing delivers servers, storage and software over the internet
- Organisations rent capacity instead of buying hardware
- Services scale up and down with demand
- It enables faster launches and global reach

KEY IDEA

Most savings come from switching off what you are not using.

How it works



Choose

IaaS, PaaS or SaaS



Deploy

Apps and data to the
cloud



Scale

Auto-scale with
demand



Optimise

Monitor cost and
performance

Core components

1

Compute

Virtual machines and containers.

2

Storage

Object, block and file storage.

3

Networking

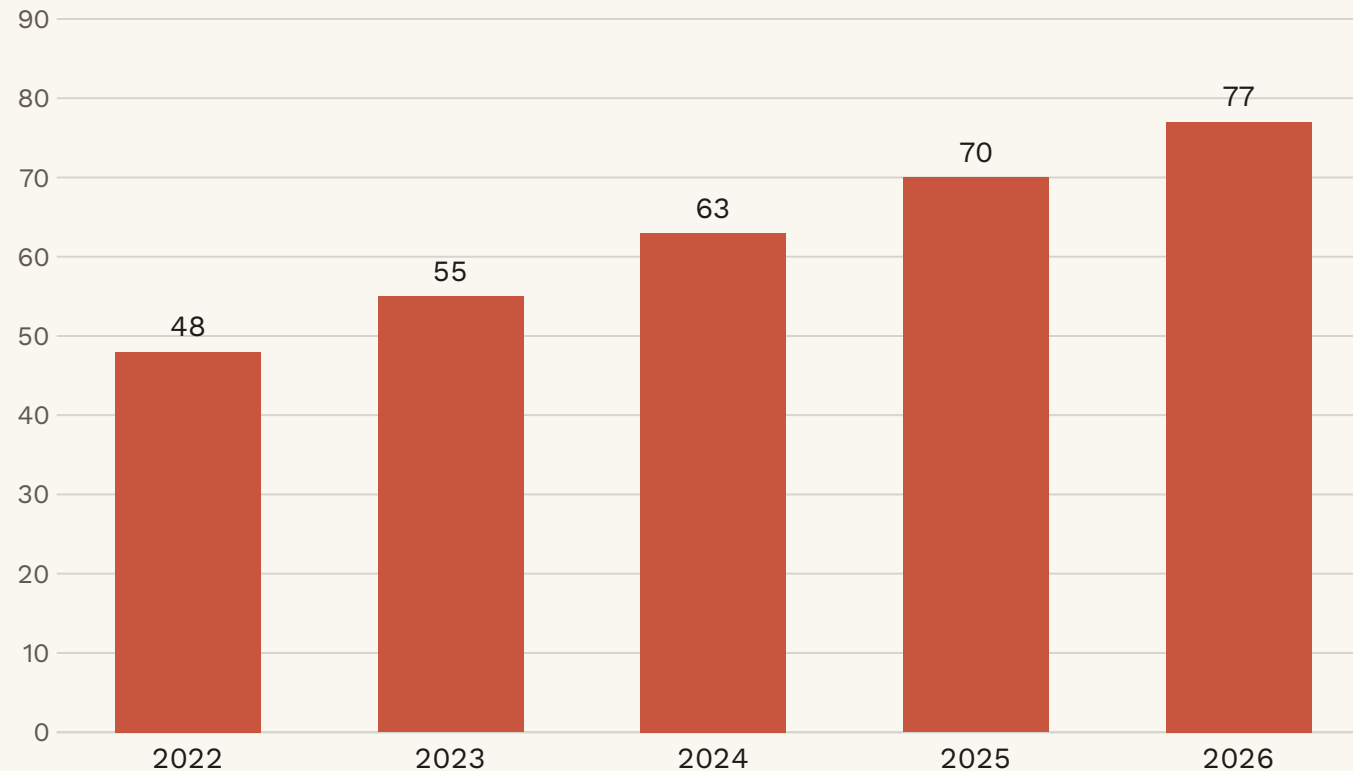
Load balancers, CDNs, VPNs.

Tools and options

Layer	Popular choices	Notes
Compute	VMs, containers, serverless	Match to workload
Data	Managed databases	Backups included
Ops	Monitoring, IaC	Automate everything

Generic examples; pick what fits your project.

Adoption over time



Adoption keeps rising as tools mature (sample data).

Sample data for illustration — replace with your own figures.

Use cases



Image 1

Websites

Hosting that scales with traffic



Image 2

Analytics

Big data on demand



Image 3

Backup

Off-site disaster recovery

Benefits and risks

Benefits

- ✓ No upfront hardware cost
- ✓ Scale in minutes
- ✓ Global availability

Risks

- Costs can creep up
- Vendor lock-in
- Needs new skills

Best practices

1

Tag resources

Know who owns what.

2

Set budgets

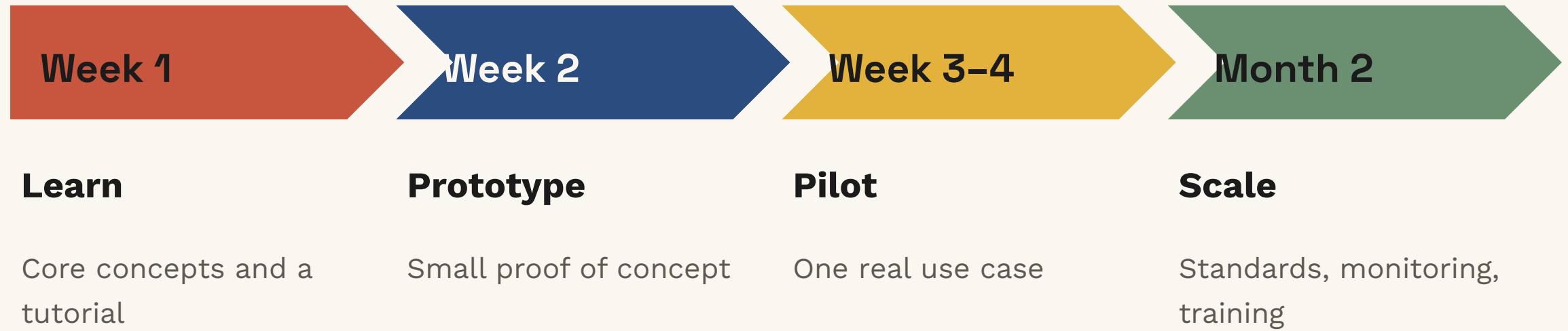
Alerts before overspend.

3

Automate

Infrastructure as code.

Getting started roadmap



BLOCKCHAIN EXPLAINED

04



Ledgers, blocks and real use cases beyond crypto

Module 4 • Blockchain Explained

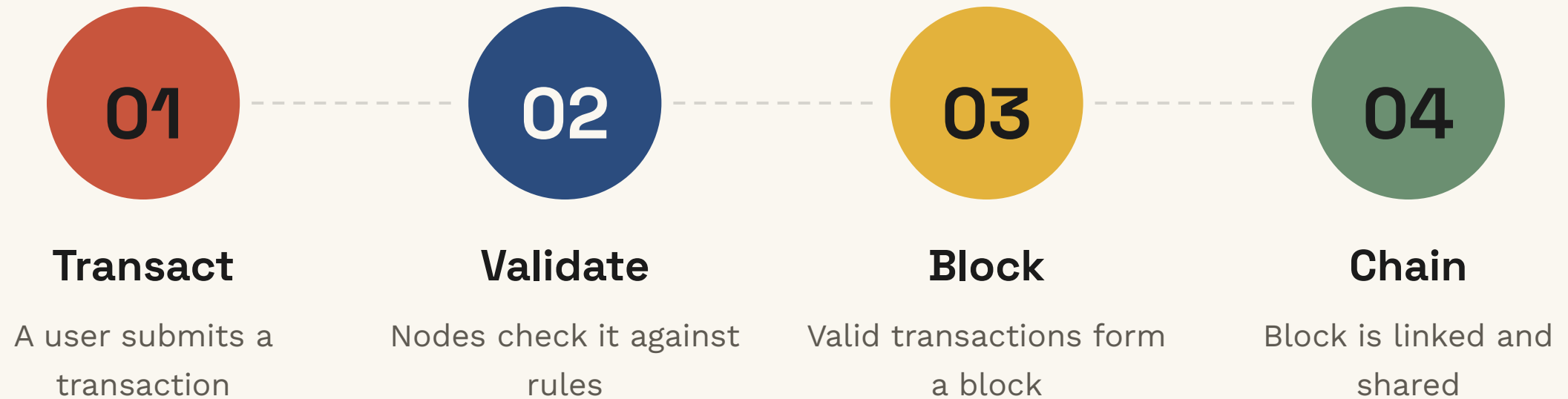
Overview

- A blockchain is a ledger copied across many computers
- New records are grouped into blocks and linked
- Tampering is hard because every copy must agree
- Uses include supply chains, certificates and payments

KEY IDEA

**Not every problem
needs a blockchain
— a database is
often enough.**

How it works



Core components

1

Ledger

Append-only shared record.

2

Consensus

How nodes agree on the truth.

3

Smart contracts

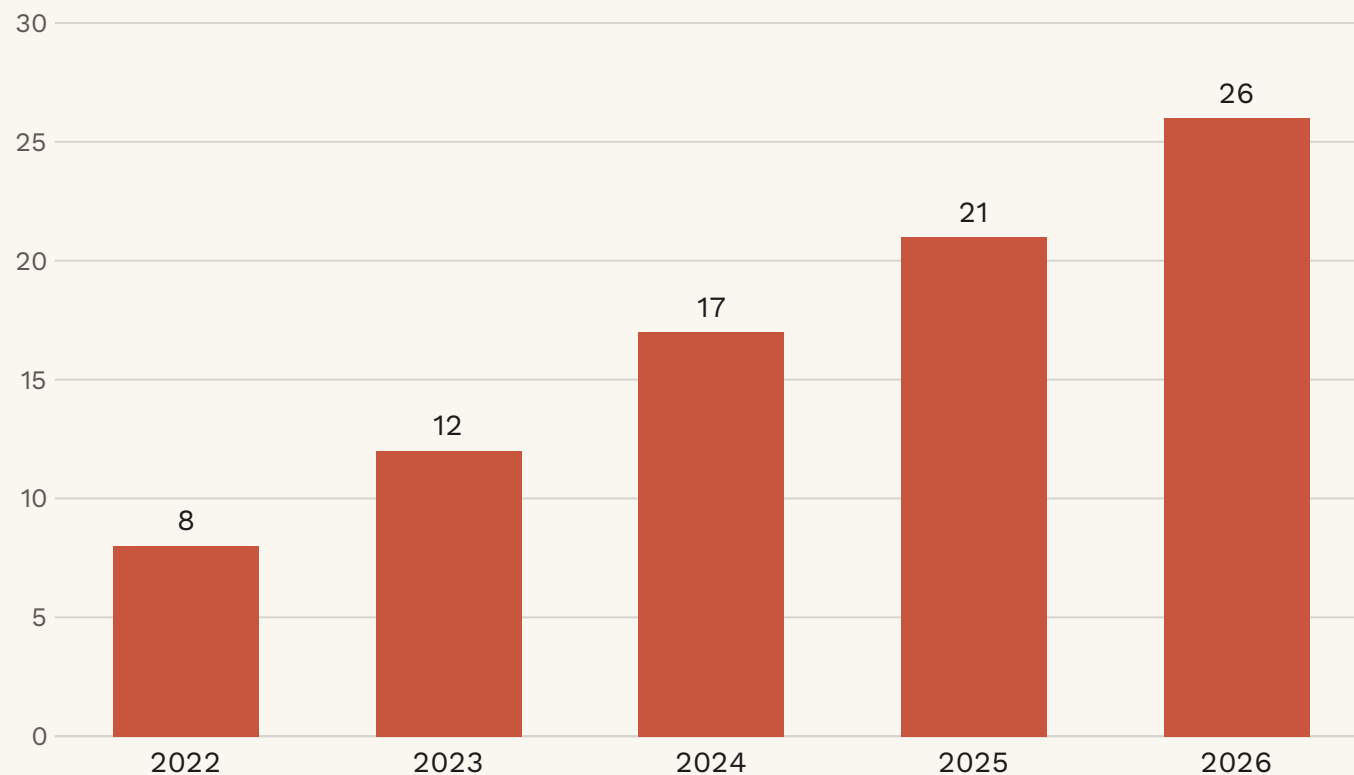
Code that runs on the chain.

Tools and options

Layer	Popular choices	Notes
Public chains	Open networks	Anyone can join
Private chains	Permissioned networks	Known participants
Wallets	Key management apps	Protect private keys

Generic examples; pick what fits your project.

Adoption over time



Adoption keeps rising as tools mature (sample data).

Sample data for illustration — replace with your own figures.

Use cases



Image 1

Certificates

Tamper-proof degrees



Image 2

Supply chain

Track goods end to end



Image 3

Land records

Transparent ownership

Benefits and risks

Benefits

- ✓ Tamper-evident records
- ✓ No single point of control
- ✓ Transparent audit trail

Risks

- Energy and cost concerns
- Hard to fix mistakes
- Regulation still evolving

Best practices

1

Start small

Pilot one use case.

2

Mind privacy

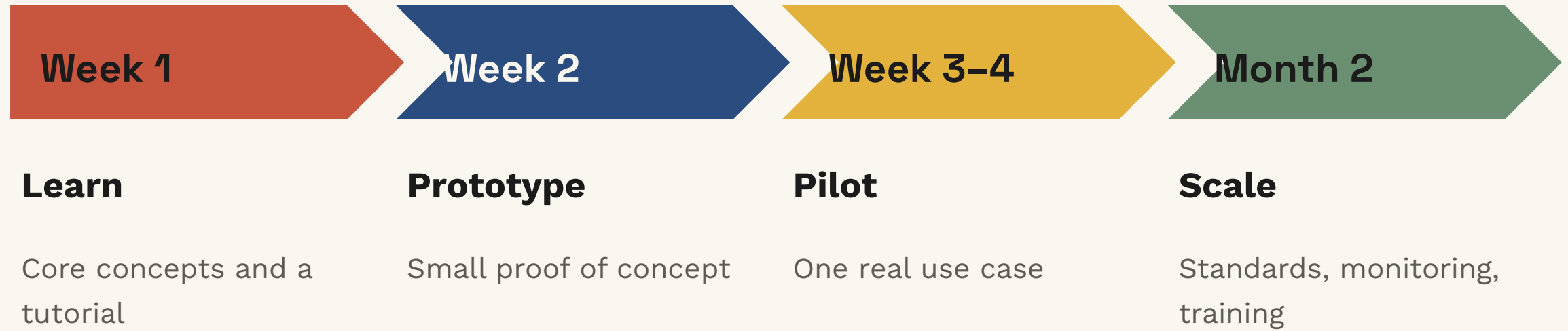
Keep personal data off-chain.

3

Plan governance

Who decides upgrades?

Getting started roadmap



Thank you

Questions and discussion.

Presenter Name

hello@yourdomain.in