



Delivering Consumer OTT services

Sven Størmer Thaulow - CEO

A Part of



telenor
group

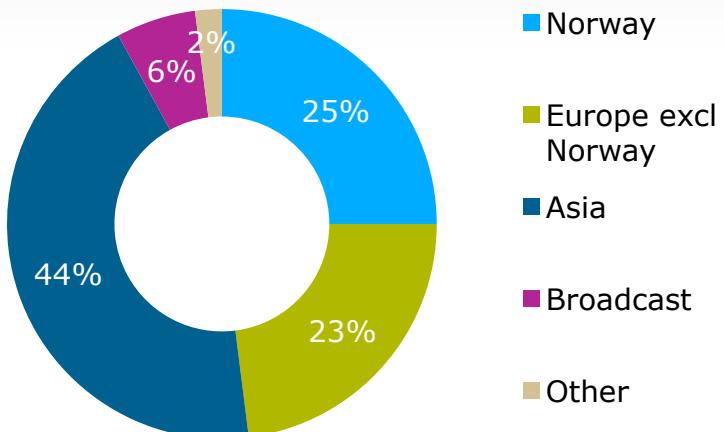
Digital Services

comoyo™

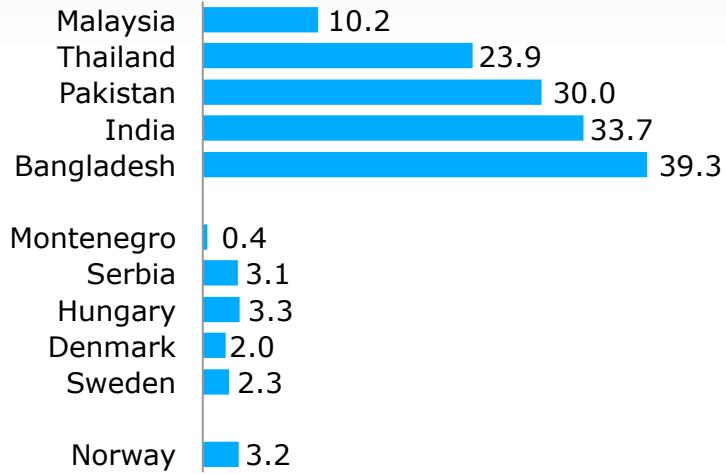
- Mobile operations in 11 markets in Norway, Europe and Asia
- A voting stake of 39.5 per cent (economic stake 35.7 per cent) in VimpelCom Ltd. with 209 mill. mobile subscriptions in 18 markets
- Among the top performers on Dow Jones Sustainability Indexes
- Revenues 2011: NOK 99 bn



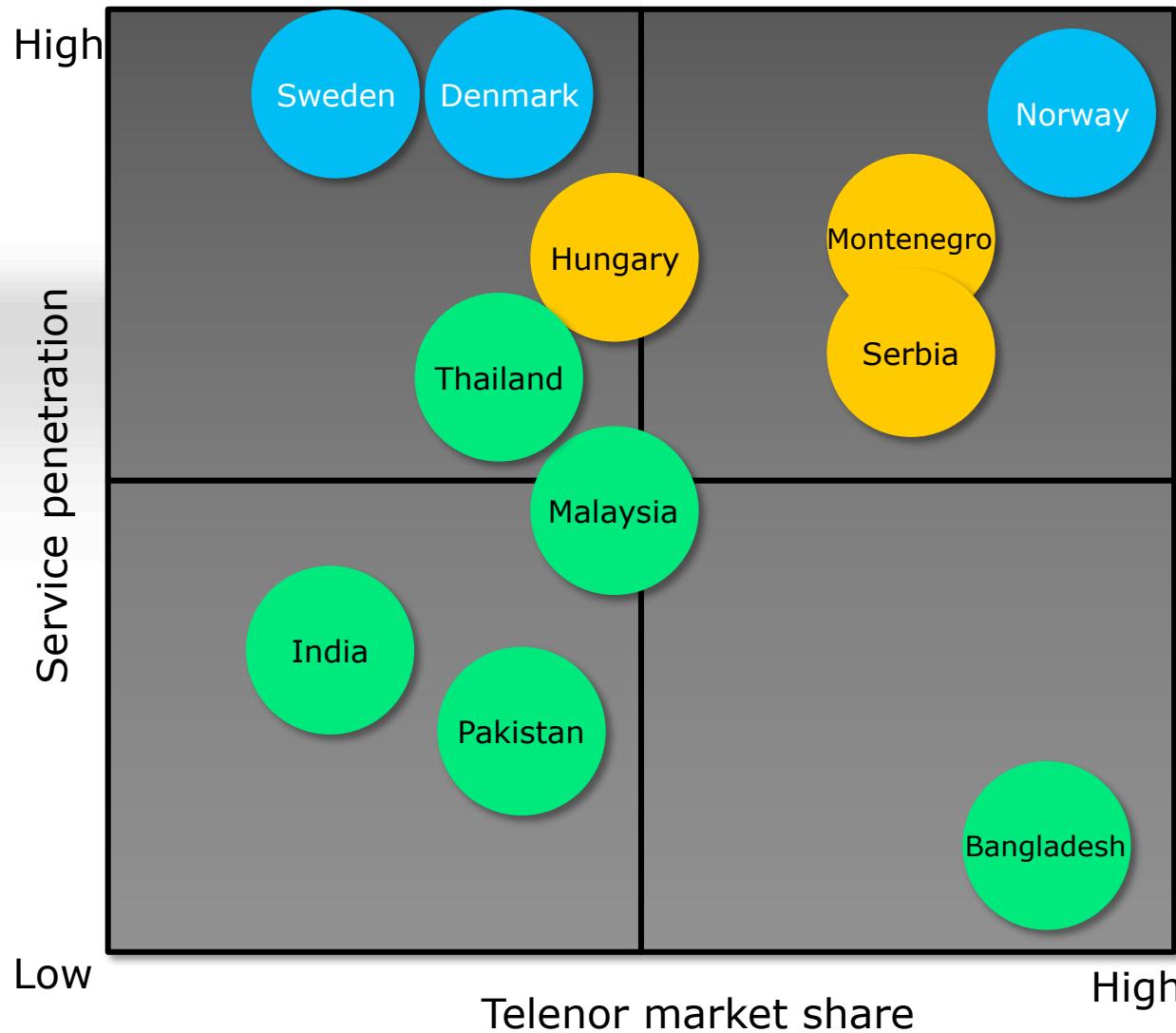
Revenue distribution, Q2 2012

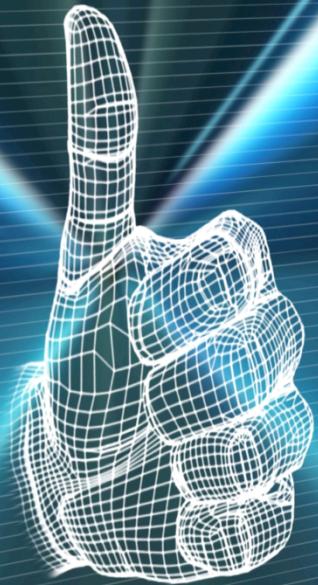


More than 150 mill. consolidated mobile subscriptions, Q2 2012



Telenor markets present different opportunities, based on service penetration and Telenor's position





87955223402651
154205465321
85224569000059
2547823665523
65585224745521
95222454318754
35412553789451
54821214563346
87955223402653
15420546532144
85224563215054
2547823665523
65585224745521
95222454318754
35412553789451
54821214563346

Digital Services – using our assets to deliver excellent services

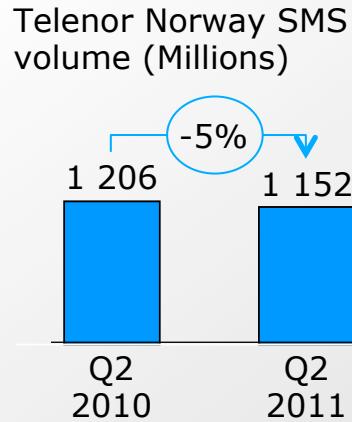
We exist to deliver best in class services to our customers that create value for Telenor Group

Potential sources of pressure on core communication services

Substitutes threaten our traditional services



facebook

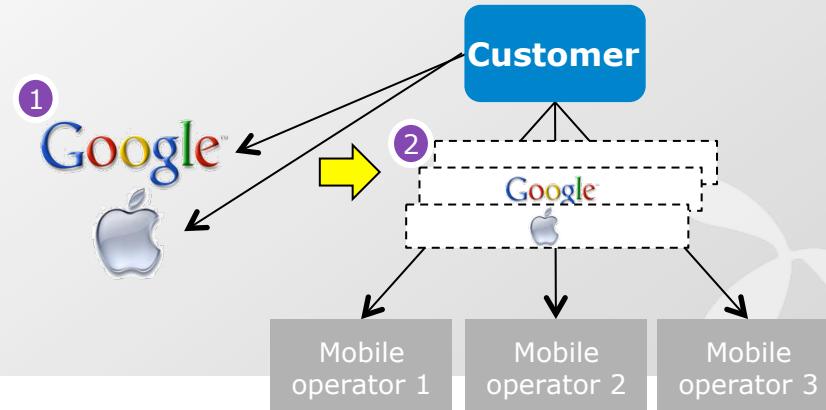


MVNOs and regulation are pushing prices and profits down

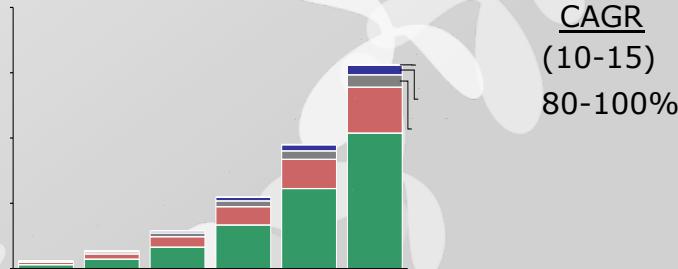


E.g. termination fees

Ecosystem players are threatening our customer relationship

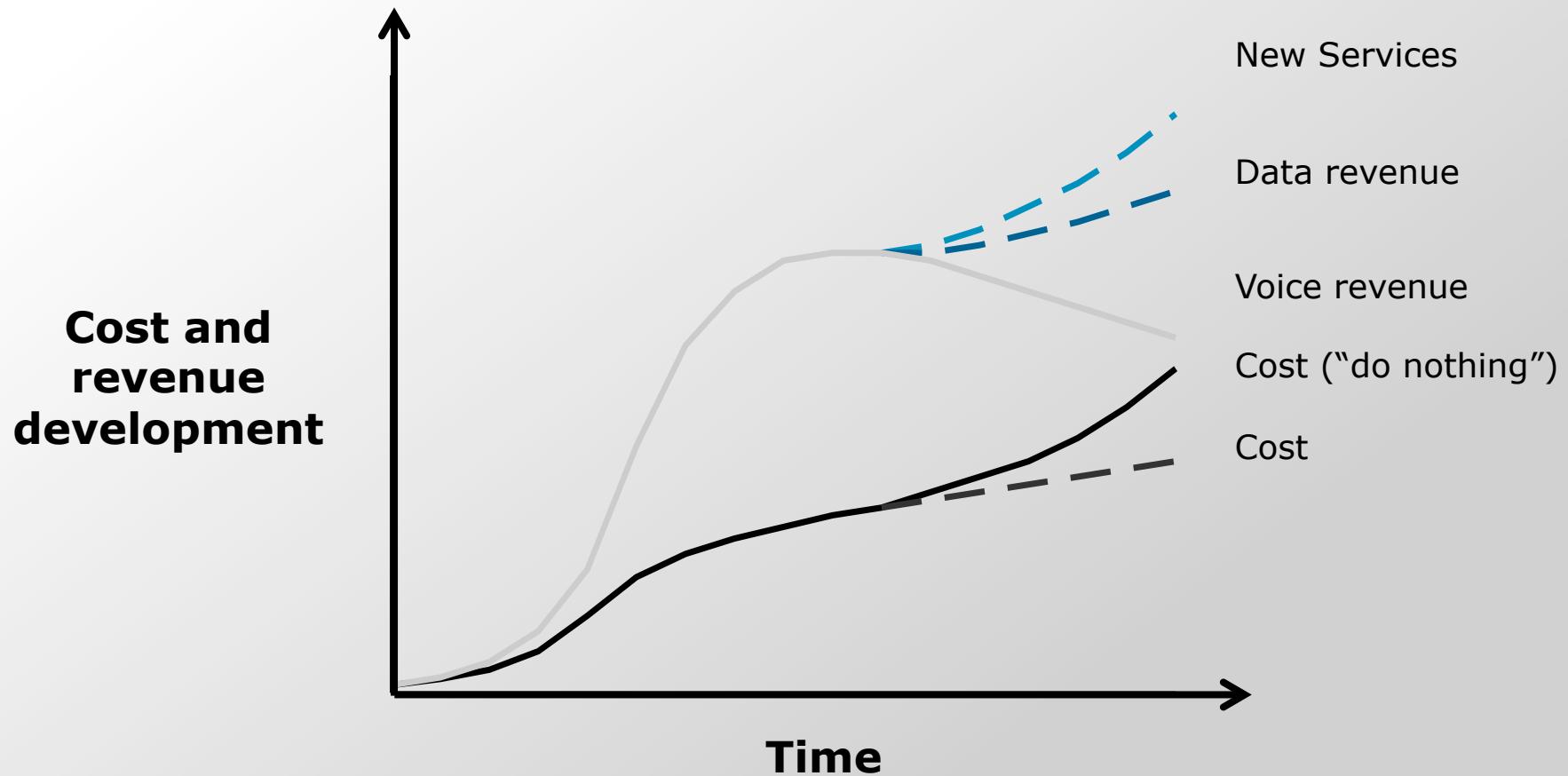


Infrastructure cost likely increasing due to surging data traffic



Source: Cisco VNI Mobile, 2011

Internet disrupts existing service model but enables growth based on positions within new services and data



Digital Services delivers new services that strengthen the core, or leverage existing assets

Strengthen the core



Comoyo

- Create stickiness
- Drive ARPU uplift
- Reduce switching costs between ecosystems

Leverage existing assets



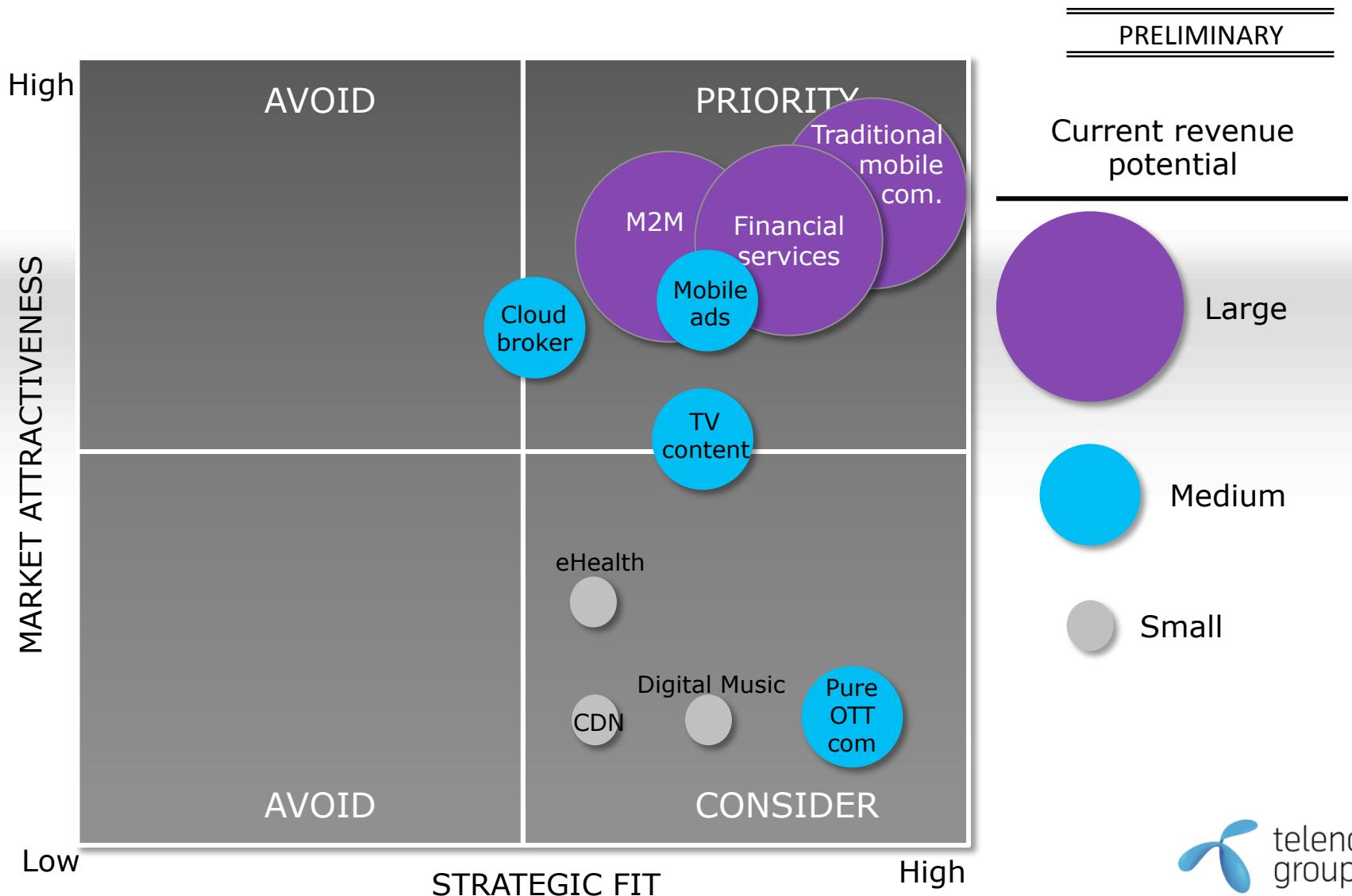
M² M



Comoyo

- Secure additional and/or future revenue streams

We have prioritized key focus areas based on their market attractiveness and strategic fit



TELENO DIGIT

ES



M2M

TELENO
NEXT

BUSINESS
CLOUD

COMMERCIAL
DEVELOPMENT

CONSUMER
(COMOYO)



GLOBAL BACKEND

TELENOR D

FINANCIAL
SERVICES

E-Health

Telenor
Connexion

Telenor
Objects &
mHealth

Telenor
Traxion

Telcage

Telespor



TELENOR
NEXT

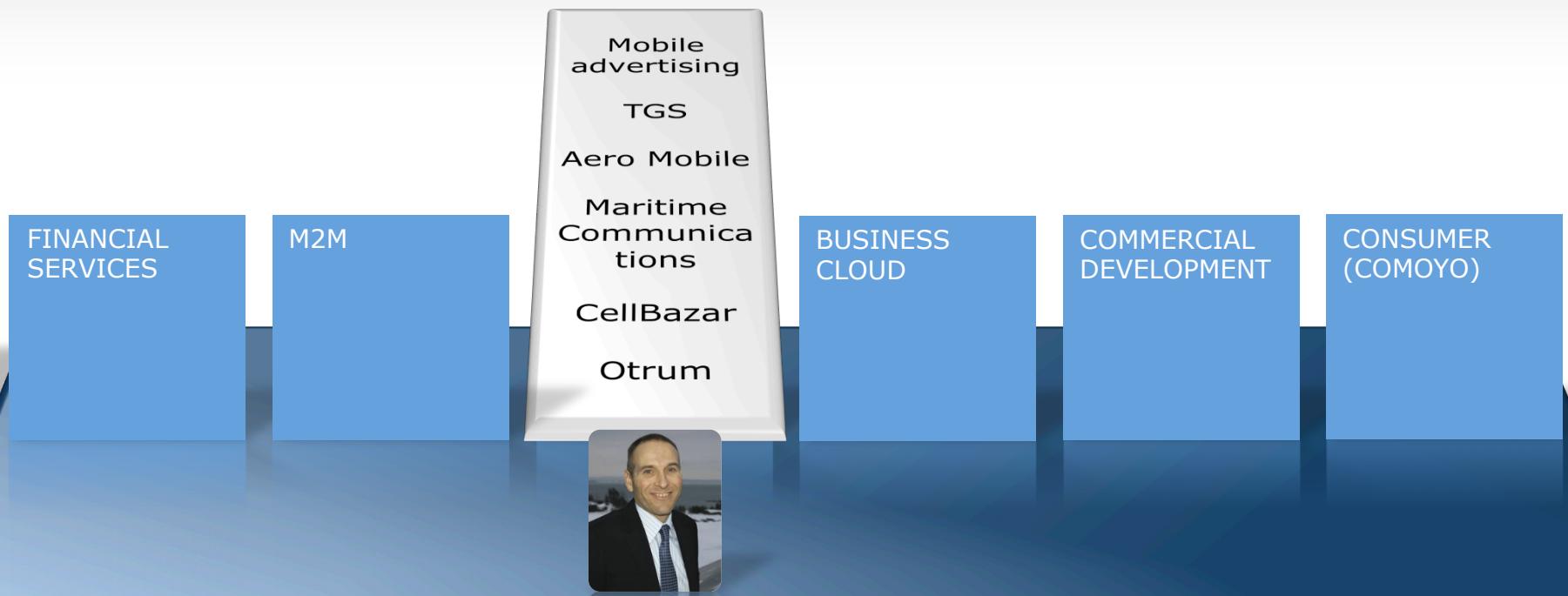
BUSINESS
CLOUD

COMMERCIAL
DEVELOPMENT

CONSUMER
(COMOYO)

GLOBAL BACKEND

TELENOOR DIGITAL SERVICES



GLOBAL BACKEND

GLOBAL BACKEND



TELENOOR DIGITAL SERVICES



GLOBAL BACKEND

TELENOOR DIGITAL SERVICES



GLOBAL BACKEND

ERVICES

Open web device



Digital Distribution



Global partners

Microsoft

Telefónica

Internet Services

Mobile Internet Asia



FINANCIAL SERVICES

M2M

TELENOR
NEXT

BUSINESS CLOUD

CONSUMER
(COMOYO)

BU mgmt

Top Tier
Partners

Voice and
Messaging

Internet
Products
and
Services

Service
Enablement
and Retail



GLOBAL BACKEND

Open web
device



Digital
distribution

BlueVia

Global
partners

Microsoft



Internet
Services

Mobile
Internet Asia



COMMERCIAL
DEVELOPMENT

Partners

Voice and
Messaging

Internet
Products
and
Services

Service
Enablement
and Retail

FINANCIAL
SERVICES

M2M

TELEFONER
NEXT

BUSINESS
CLOUD

CONSUMER
(COMOYO)

GLOBAL BACKEND



FINANCIAL
SERVICES

M2M

TELENO
NEXT

BUSINESS
CLOUD

COMMERCIAL
DEVELOPMENT

CONSUMER
(COMOYO)



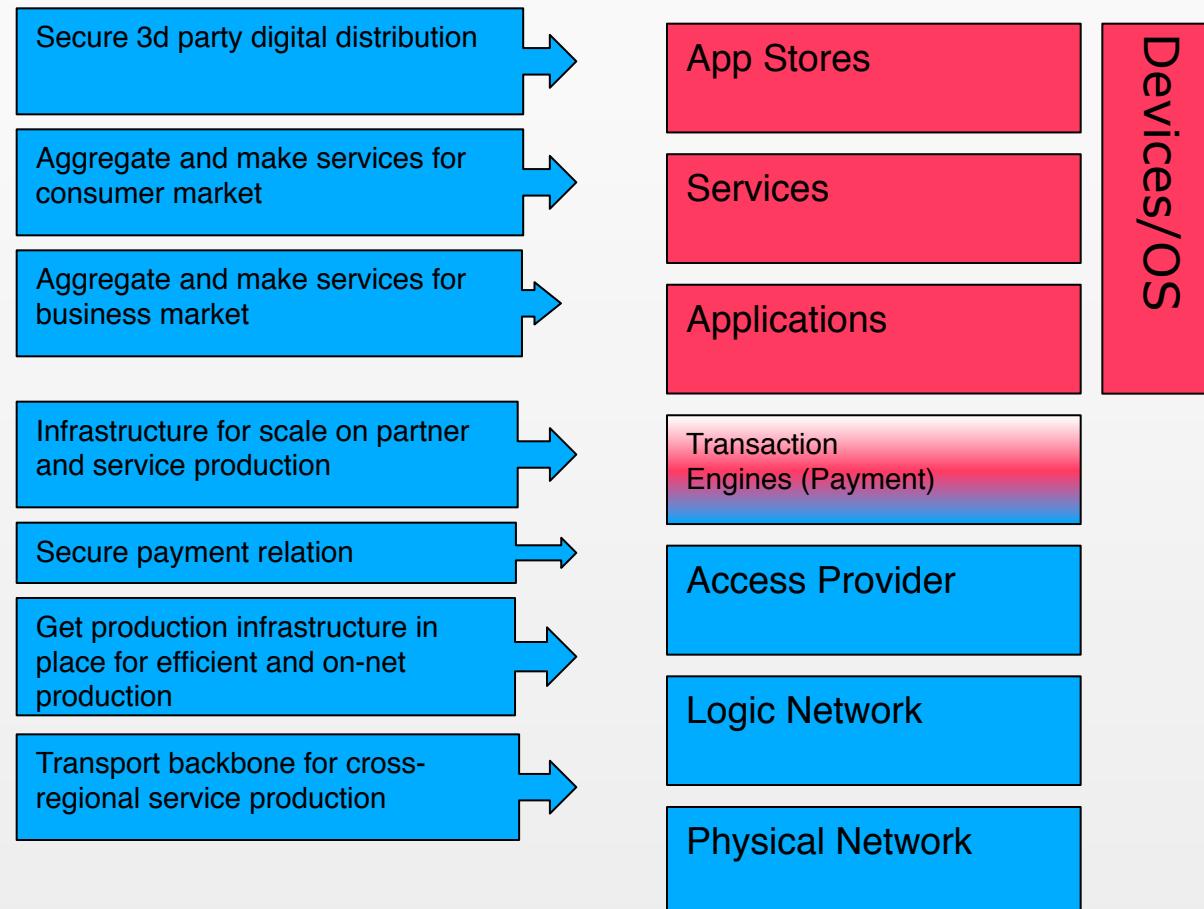
GLOBAL BACKEND

TELENO R DIGITAL SERVICES

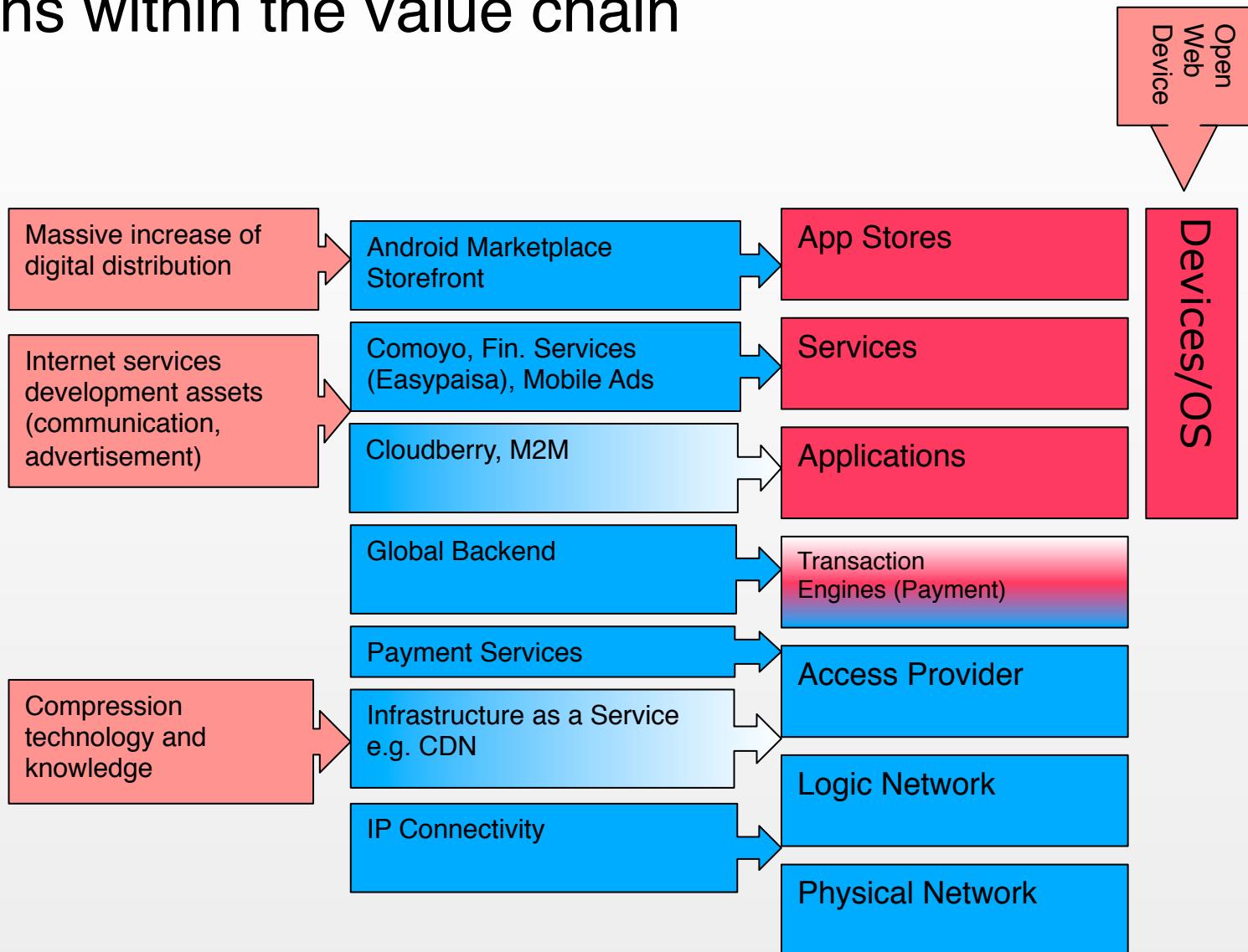


GLOBAL BACKEND

Telcos need to rapidly take stakes in the new Internet-based production and distribution environment and get scale



Digital Services are taking several bets and positions within the value chain



A cluster of glossy, translucent red spheres and rounded rectangular shapes, some with internal highlights, are positioned on the left side of the slide. A thin black horizontal line extends from the right edge of this cluster across the slide. A small black arrow points towards the text from the right edge of the cluster.

The rationale behind Comoyo

What is Comoyo? An industrial view

- 1 A HORIZONTAL SERVICE PROVIDER DELIVERING INTERNET BASED SERVICES TO CONSUMERS
- 2 DELIVERS 3D PARTY SERVICES AND ITS OWN DEVELOPED SERVICES
- 3 MAKES IT POSSIBLE FOR TELENOVS BUSINESS UNITS TO BUNDLE THESE SERVICES WITHIN THEIR CORE PRODUCTS
- 4 A FULL FLEDGED GLOBAL SERVICE PROVIDER MEANING SEPARATE ID, PAYMENT, CRM, RECOMMENDATION ENGINE, SETTLEMENT ETC - going stepwise

define: SERVICE

**Services are delivered on top
of a transportation layer**

**Hence a mobile broadband
subscription is not defined as
a service**

define: PRODUCT

the total offering given to the consumer. can contain e.g. several services and additional benefits

Hence a bundle of mobile broadband, voice, sms and premium customer care is a product

**TELCOS AND TV
DISTRIBUTORS DELIVER
SERVICES ON END-TO-
END CONTROLLED
VALUE CHAINS**

OVER-THE-TOP SERVICES ARE DELIVERED STRAIGHT OVER THE OPEN INTERNET

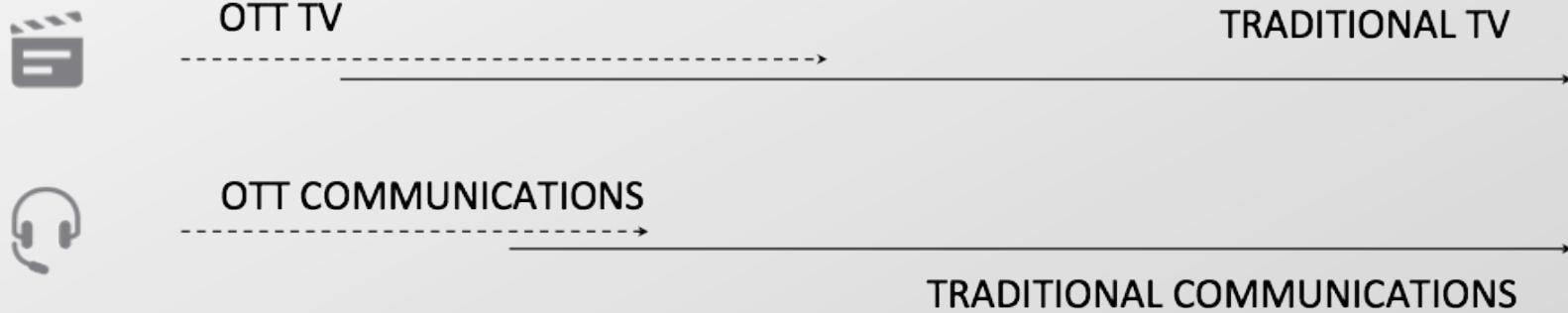
NETFLIX

facebook®

skype™

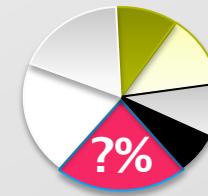
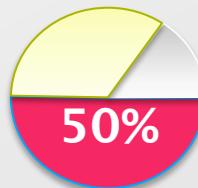
OVER-THE-TOP SERVICES GROW FAST

AND SUBSTITUTES TRAD SERVICES OVER TIME



GLOBAL SCALE
TRANSFORMS
THE TELCO &
MEDIA
INDUSTRIES

And the game on how to “Own the end user” on services is changing again..



Plain old
Telephony (POTS)



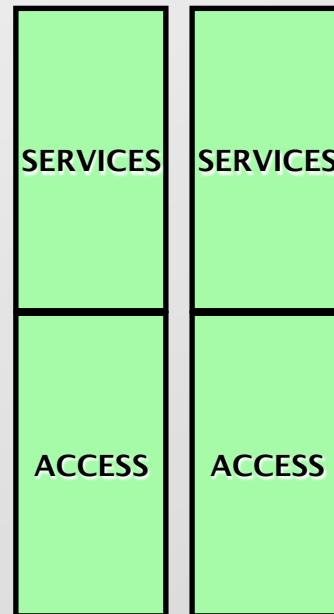
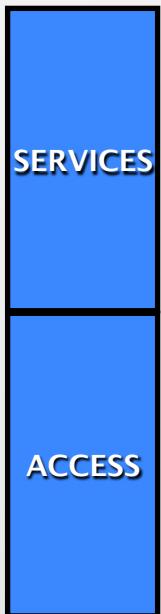
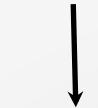
Mobile voice and
SMS



Application and
browser based
communication

TELCOS AND THE CUSTOMER SOME YEARS AGO

Customer
John Doe



Telenor
BUI

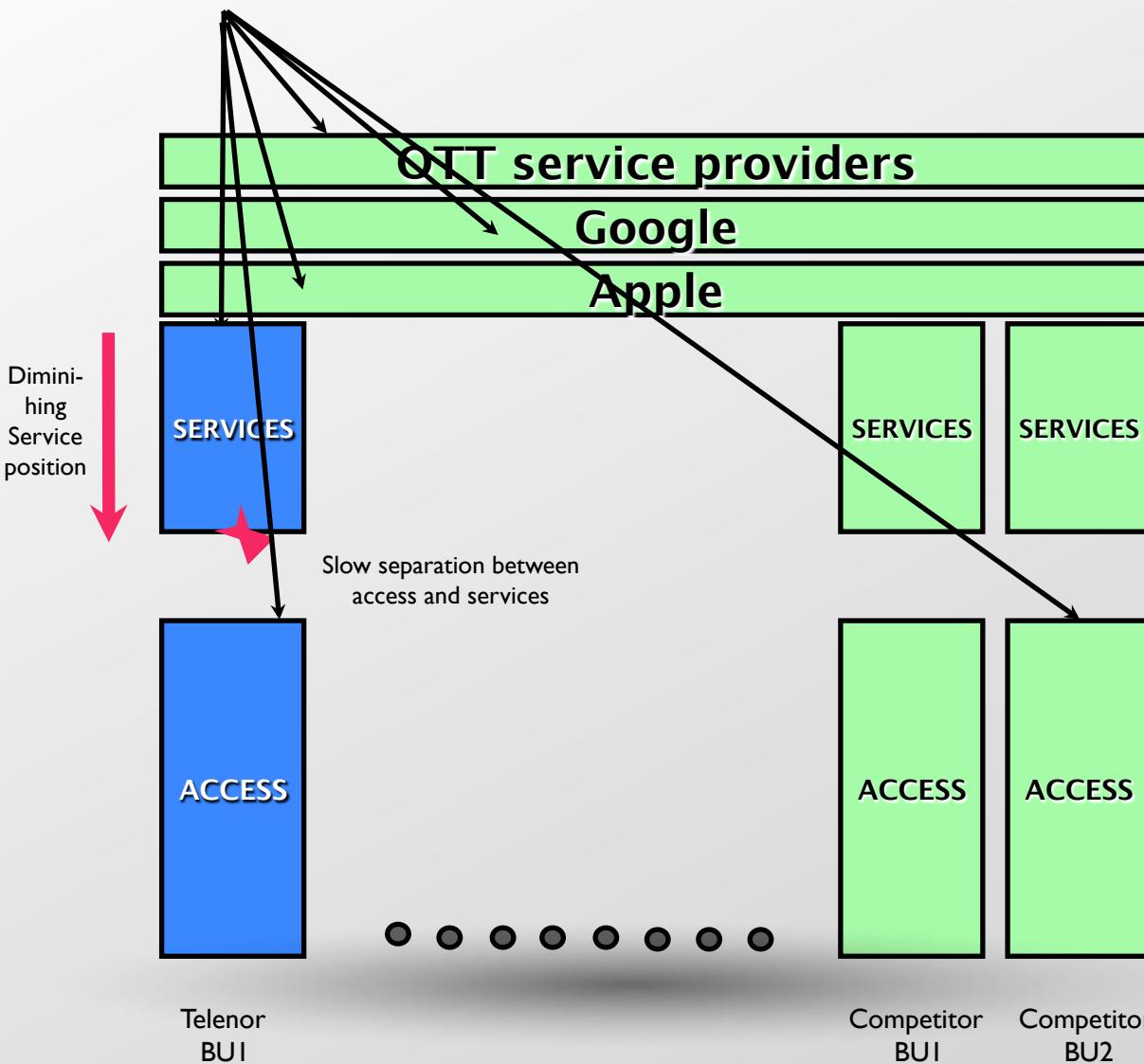
Competitor
BUI Competitor
BU2

comayo™

- * Vertical Service Providers
- * Customer has ONE Service Provider providing Access + Service

THE CUSTOMER AND TELCOS NOW

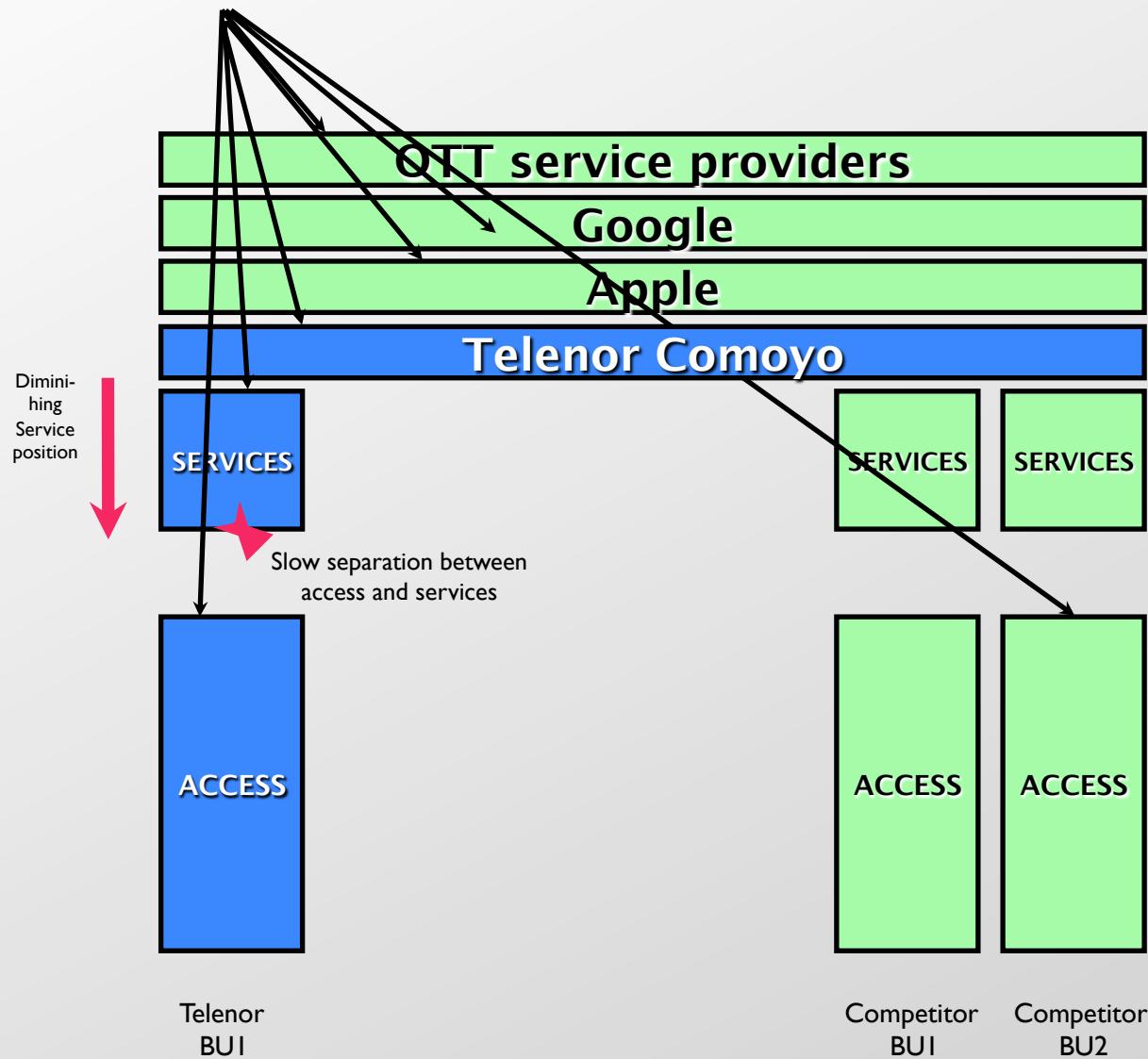
Customer
John Doe



- * Horizontal and access agnostic (OTT) Service Providers gain strong positions
- * Customer has MULTIPLE Service Providers providing on Service layer
- * Vertically integrated Service Providers are pressured on Service layer

THE CUSTOMER AND TELENO R IN SOME YEARS

Customer
John Doe



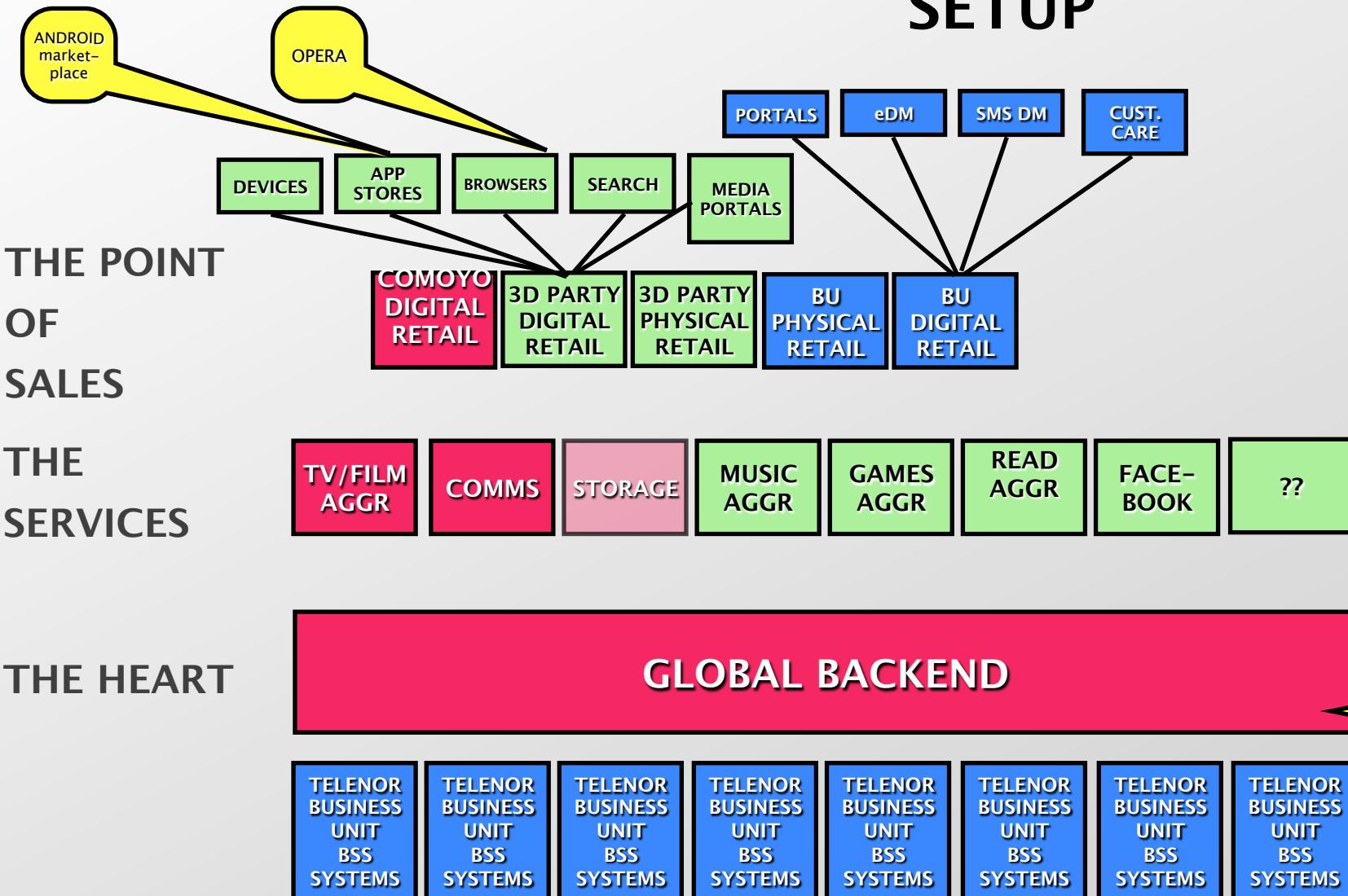
* Telenor built their own horizontal, global and access agnostic (OTT) Service Provider Telenor Comoyo

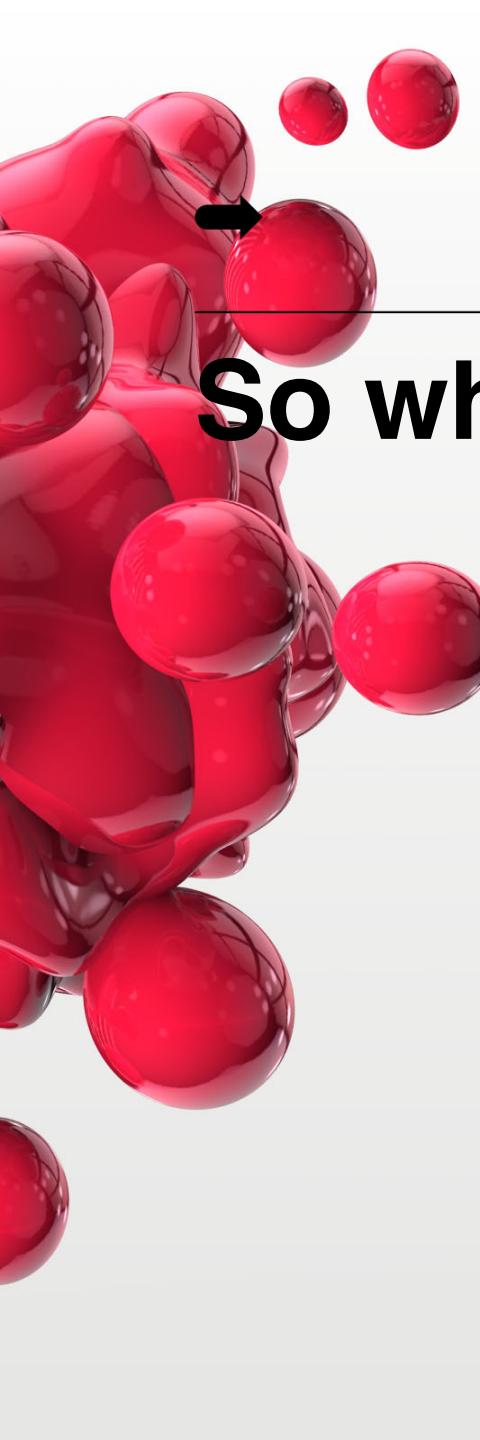
* Customer base fueled by Telenors vertical service providers (BUs) by bundling offers between Telenor Comoyo and Telenors BUs

* When customers churned from Service layer in Telenors BUs the customer relationship is kept in the horizontal unit Telenor Comoyo

com Yo

THE TELENO & COMOYO SETUP





So what does Comoyo do?



What does Telenor Comoyo do?

...for our customers

**We make, enable and sell
services delivered over the
internet**



What does Consumer OTT do?

...for our owners

We are set up to make Telenor Group relevant for consumers in the "internet service age"

-

We are the innovation house for Telenor Group on consumer internet services



Comoyo is an internet services company.

We scale global, act local and utilize Telenors assets to deliver excellent services to end users.

Comoyo focus on four key service areas

1



Internet based Communication services - on multiple devices and multiple networks – voice, messaging, contacts, email

2



Internet based Service retailing – sell services through other application stores with operator billing

3



Internet based TV/Film service - on multiple devices and multiple networks

4



Global backend to enable rapid roll-out of services and partners in most cost efficient way

Service areas support existing business models and prepare for disruption

1



**Strenghten existing BU communication services
Fight OTT players on same turf**

2



Secure future distribution channel for services

3



**Strengthen existing BU moving picture services
Fight OTT players on same turf**

4



Bring global scale to service deliveries

KEY BELIEFS

All services will be internet based and network agnostic

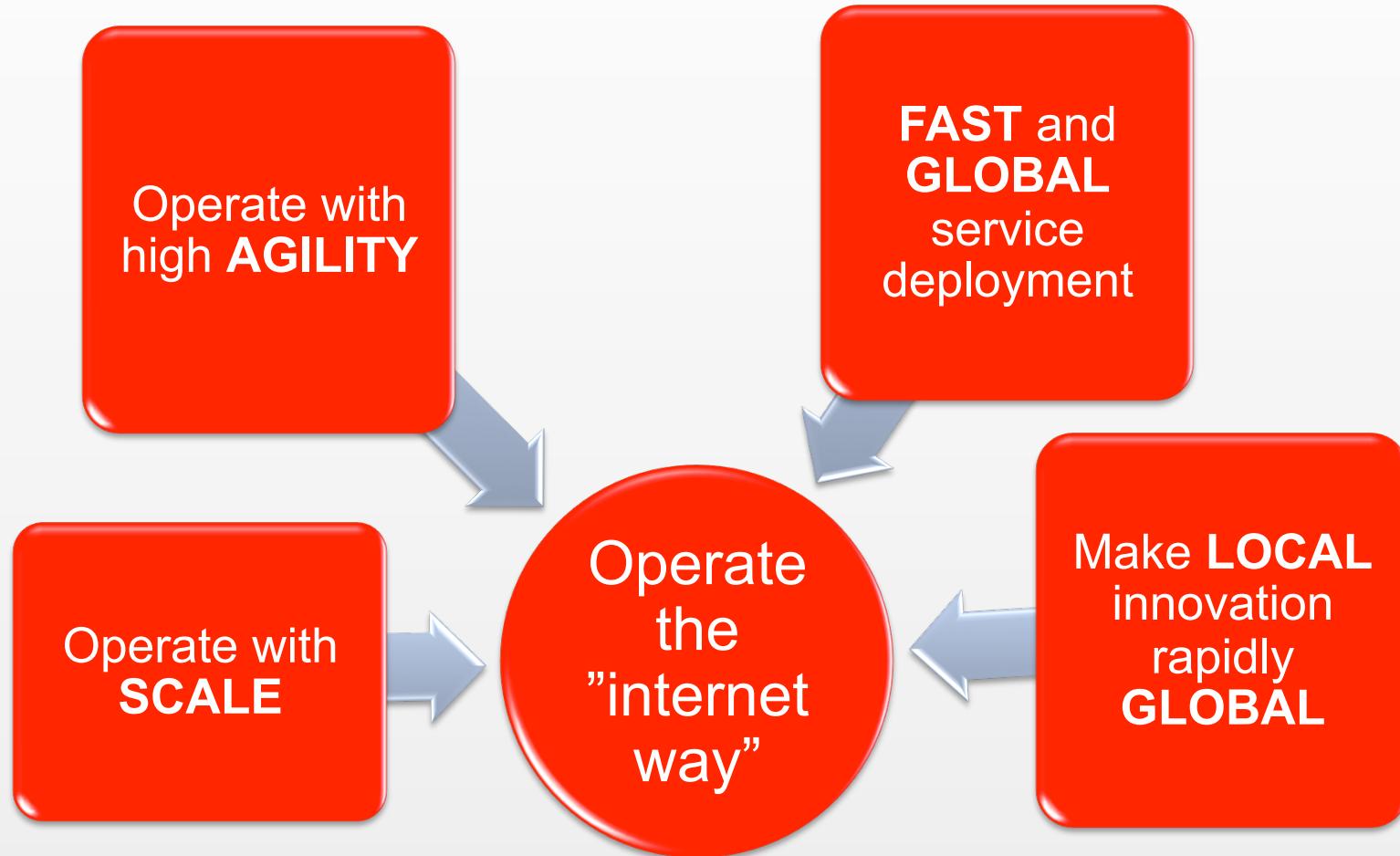
Telcos will increasingly bundle access and services

Flexible and individual data pricing is needed to add bundle value

Innovation and speed will be key to stay competitive

Customers will radically increase to purchase services digitally

We are building new capabilities to be a part of this industry development





Culture: How do we do things here?

1. We DELIVER stuff – talk is cheap.
2. You MUST understand your colleagues' work
- we work x-functional
3. We love bold RISKS to gain positions
4. We ruthlessly focus on USER EXPERIENCE
5. We go for gold through TRIALS AND ERRORS – not endless planning
6. We give medals to those taking RISK AND RESPONSIBILITY
7. We honour MERITS and hate mediocrity
8. If there is an issue –handle it! Don't expect “someone” to fix it
9. We CHALLENGE each other - silence is a crime!



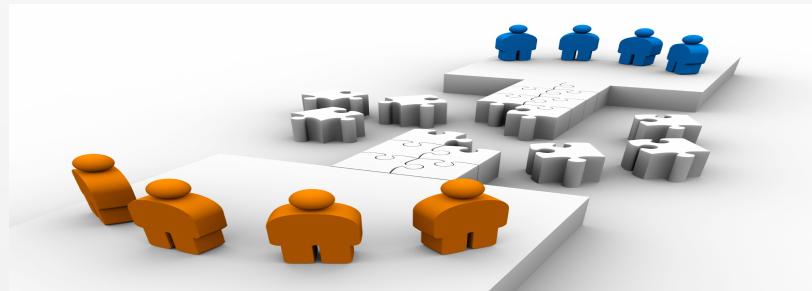
What we have done so far..

VIDEO ON DEMAND AND TV

MY CONTACTS

LIVE FOOTBALL

GLOBAL BACKEND COMMERCIAL



LAUNCHED WITH GOOGLE PLAY

BIG DATA ANALYTICS

**”WTF?! IS THIS
GLOBAL
BACKEND?”**



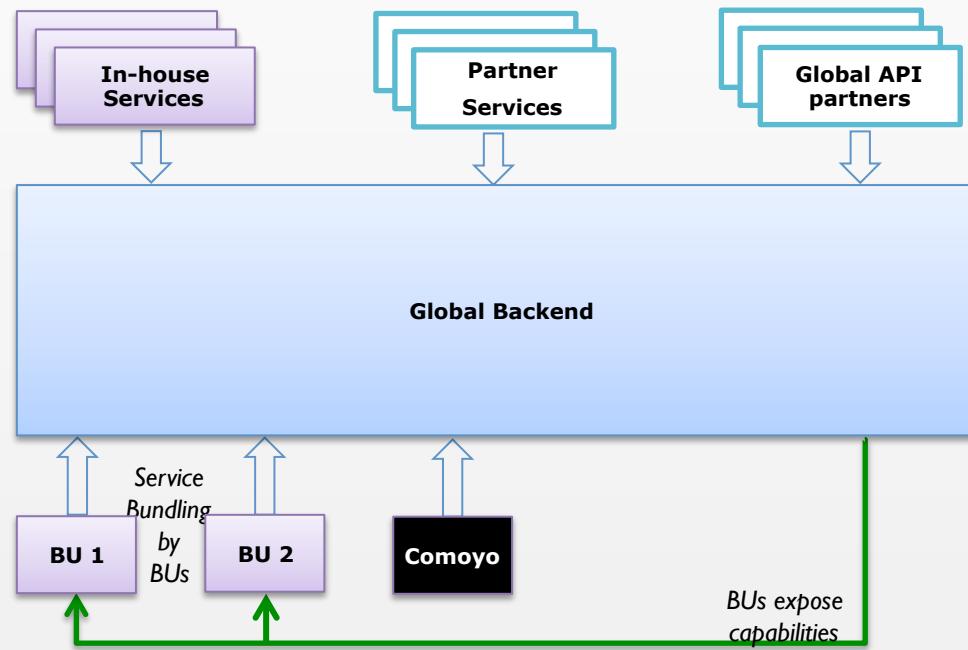


Global Backend - the foundations for it all

- **Why:** We build global backend to enable Bus and Telenor Group to join the "internet services age"
- **What:** Global backend is a new global infrastructure built the internet way – low cost, extremely scalable – which handles Global ID, service provisioning, settlement, big data and operator billing.
 - Works between Digital services, partners and the Bus
- **How to get it done:**
 - Scale like the internet companies (i.e. mail)
 - Iterate – dont wait for the big bang but g.. damn start to do things
 - Marketing and Tech resources in from BUs from the beginning

Global Backend is a key enabler

- Global Backend is a key enabler for **Service providers** enabling distribution to Telenor customer base



- Global Backend enables **Business Units** to distribute services through their established channels to value-add their core offerings.

So how do we build the Global Backend?

- **Service needs** drives capabilities in Global Backend (and services are developed focusing on UX)
- Deployed in cloud infrastructure
 - No up-front investments
 - Pay-for-usage
 - Extra capacity is provisioned in minutes (elasticity)
- **In house** engineering team
 - Hire only top-notch people
 - Engineers have experience developing large-scale services for Google, YouTube, Yahoo!, FAST, Microsoft, Opera.
- Low-cost, no-frills operation



To scale we are building Global Backend based on hard principles

1. **Simplicity** trumps most other concerns
2. **Empower developers**, design for change
3. **Agile approach** - small tangible iterations that provide customer value
4. Control over **lifecycle of data** dictates who is responsible to call
 1. BUS and Service Providers call Global Backend APIs (no direct callbacks) – Reverse Hollywood principle
 2. Group API Hub aggregates and calls legacy BU Telco APIs (e.g., CPA), i.e., Hollywood principle
5. Keep licensing cost down (**currently \$0 in software licences**)



This one is an **asset** and a **challenge** – does it represent the customer?



We're Hiring!

Check out

www.comoyo.com/careers

We are looking for the best developers!

You might work with:

- Frontend (HTML, CSS, jQuery..)
- Clients (Android, Mac/iOS, Win..)
- Authentication
- Payment
- Search
- Cloud infrastructure
- Analytics/data mining
- APIs
- Security



We're hiring both for full-time jobs, summer jobs and internships

Development office at Tyholt

~20 employees



7 summer projects in 2012



Why work for Comoyo?

- ▶ Real projects that can go into production
- ▶ Room for ideas, vision and rebellion
- ▶ Superstar colleagues

Submit application at:

comoyo.com/careers

No deadline; if you're good enough we'll hire you

