



EPAM TRIZ Innovation program

# MOBILE OPERATOR

JANUARY, 2017

# Goals

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- 1 Learn TRIZ tools and be prepared to use it for real business systems
- 2 Analyze business model of MobOp and find possible problems and conflicts
- 3 Provide a set of directions for MobOp to solve problems and improve its business

# WHAT IS MobOp?

- MobOp (formerly Everything Everywhere) is a British mobile network operator, internet service provider and a subsidiary of BT Group.
- MobOp is headquartered in Hatfield, United Kingdom and also has main offices in Bristol, Darlington, North Tyneside, LMobOpds and London. In addition to mobile telephone services, MobOp also provides an IPTV service through their MobOp TV Box.
- MobOp has approximately 13,000 full time employMobOps and 580 retail stores, and serves more than 30 million customers across its mobile, fixed and wholesale businesses.
- MobOp's 4G coverage today reaches more than 80% of the UK population. MobOp's 2G coverage reaches 99% of the population while 3G reaches



# ROADMAP: PROBLEMS & TRIZ TOOLS

## TECHNICAL DEBT & SECURITY ISSUES

- Personas profile & user jobs
- Value proposition model
- Gap analysis
- RCA+ diagram
- Value chain
- Inventive standards: *Interaction with Vendors*

## LOOKING FOR PROSEPECT OF MY MobOp APP

- Functional analysis of **My MobOp** app
- Functional analysis of process: *Content Lock*
- Reverse value proposition model
- Inventive standards: *MobOp TV Smart Reminder*
- ARIZ: *Managing several Accounts (BANs, CTNs)*



## OVERALL MOBOP BUSINESS ANALYSIS

## TECHNICAL DEBT & SECURITY ISSUES

MobOp calls it "Scaling & enabling program". MobOp has a lot of vendors (IT, support, ticketing, administration, security) with no clear collaboration scheme. Some ENGX practices and settled processes implementation could address this problem.

Also one of the vendors (responsible for Security area) doesn't provide full security scanning, defects contradict required functionality (business plan).

# PERSONAS



In MobOpd to be in touch in any point of UK; OK with middle internet spMobOpd



I want to use the latest tech if it has financial sense



I strive to enjoy life using all the existing technical possibilities

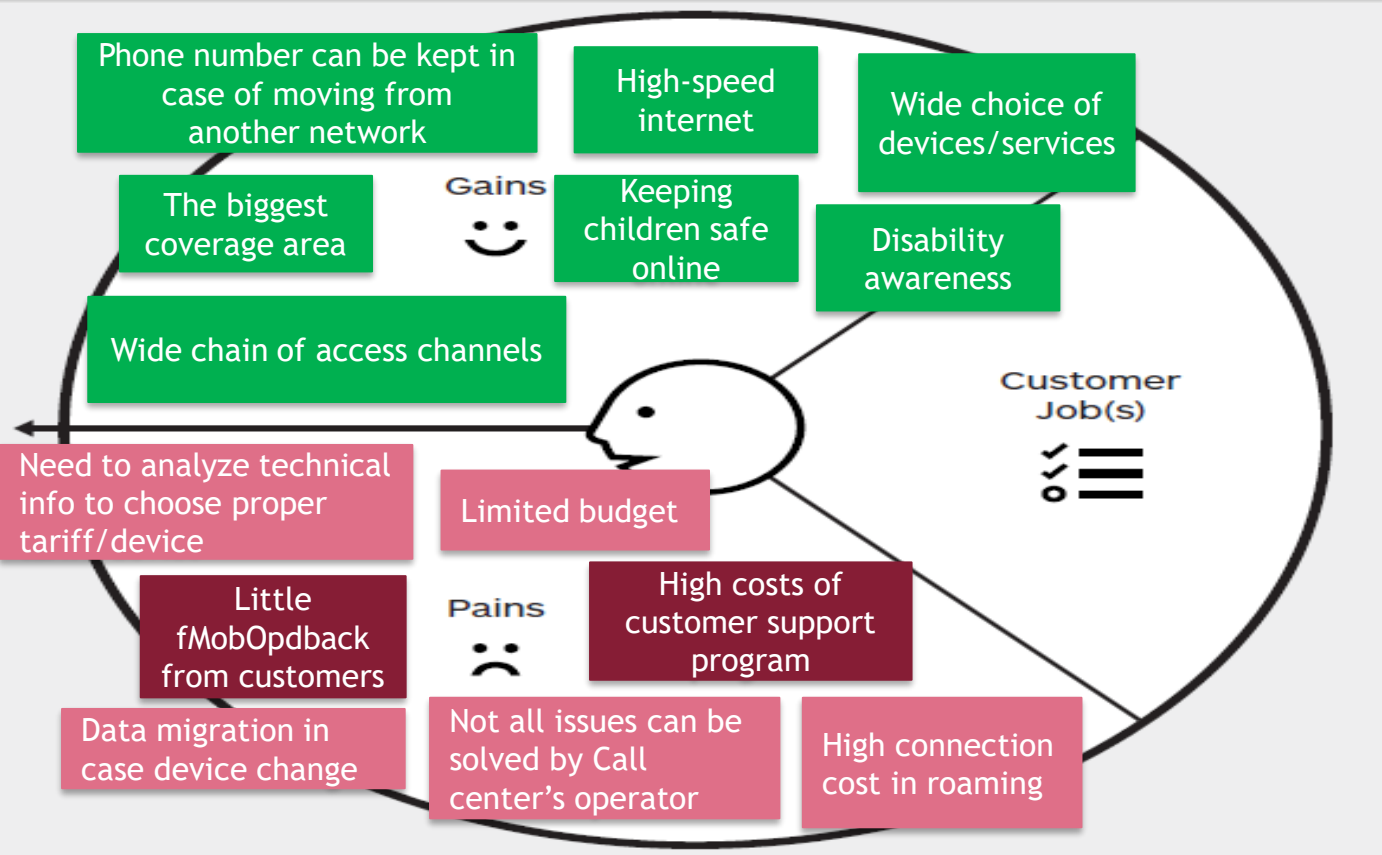


My goal - insurance in the tomorrow; I love technology because it enhances my life

# USER JOBS

- Buy\change mobile device (phone\tablet)
- Choose mobile operator
- Sign service contract
- Activate SIM
- Make an initial payment
- Make calls
- Serf internet\Stream video
- Check balance\traffic
- Top up balance
- Set auto-payment
- Request detailed bill
- Manage consumed services
- Call to call center
- Manage add-ons
- Break the contract
- Look for the nearest store
- Surf Internet
- Set up Content Lock

# VALUE PROPOSITION MODEL: Pains & Gains



## LEGEND:

Gain (for user)

Pain (for user)

Pain (for MobOp)

# GAP ANALYSIS: Gains

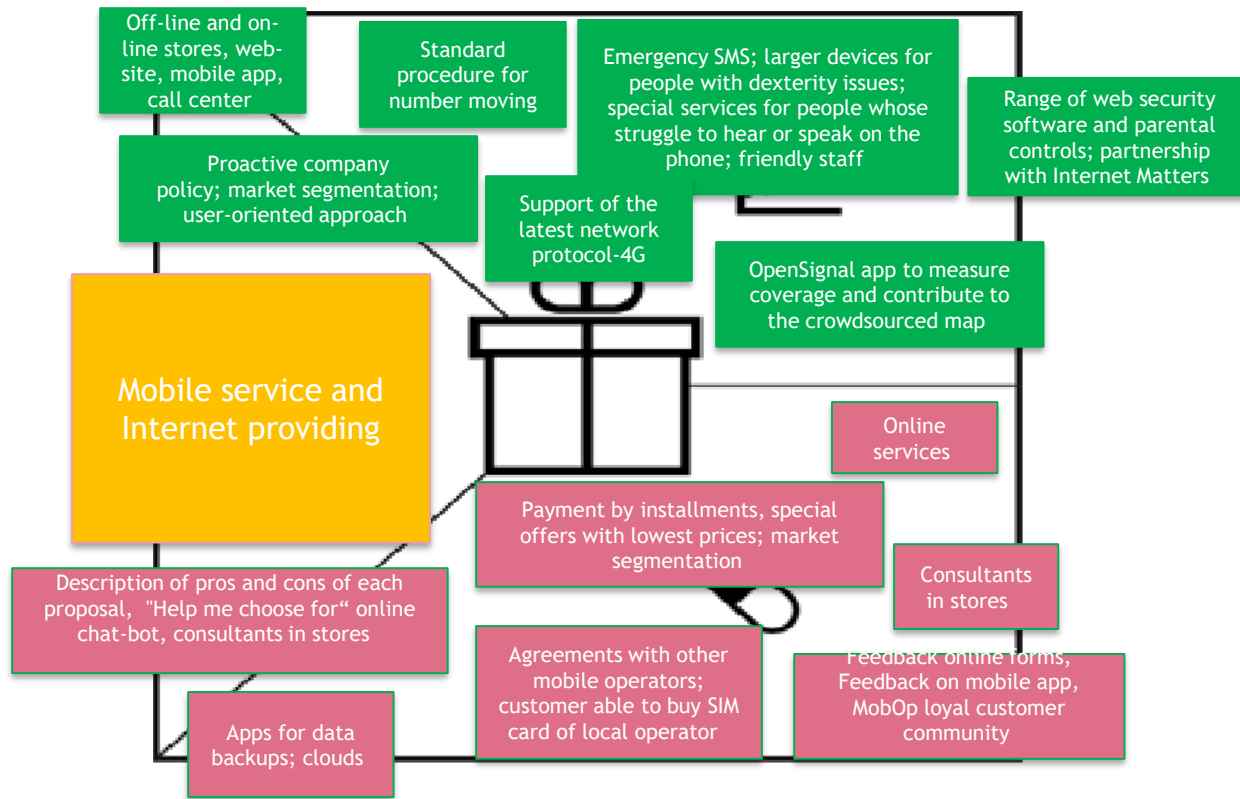
Key Gains	Gain Creators	Detected Gap (Problem)
Wide chain of access channels	Off-line and on-line stores, web-site, mobile app, call center	Unified clients database is absent (see omnichannel business model)
Disability awareness	Emergency SMS; larger devices for people with dexterity issues; special services for people whose struggle to hear or speak on the phone; friendly staff	-
Phone number can be kept in case of moving from another network	Standard procedure for number moving	-
High-speed internet	Support of the latest network protocol-4G	In fact high speed is within cities only
The biggest coverage area	OpenSignal app to measure coverage and contribute to the crowdsourced map	Low connection quality out of cities
Wide choice of devices\services	Proactive company policy; market segmentation; user-oriented approach	-
Keeping children safe online	Range of web security software and parental controls; partnership with Internet Matters	Parental control is not customized



# GAP ANALYSIS: Pains

Key Pains	Pain Relievers	Detected Gap (Problem)
Need to analyze technical info to choose proper tariff/device	Description of pros and cons of each proposal, "Help me choose for" online chat-bot, consultants in stores	-
Limited budget	Payment by installments, special offers with lowest prices; market segmentation	-
High connection cost in roaming	Agreements with other mobile operators; customer able to buy SIM card of local operator	Agreements covers not all countries, so prices is still too high
Little feedback from customers	Feedback online forms Feedback on mobile app MobOp loyal customer community	MobOp can't get feedback about issues with connection in certain regions Bad processing of feedbacks
High cost of customer support program	Online services	-
Data migration in case device change	Apps for data backups; clouds	-
Not all issues can be resolved by call center's operator	Consultants in stores	-

# VALUE PROPOSITION MODEL: Gain creators & Pain relievers



## LEGEND:

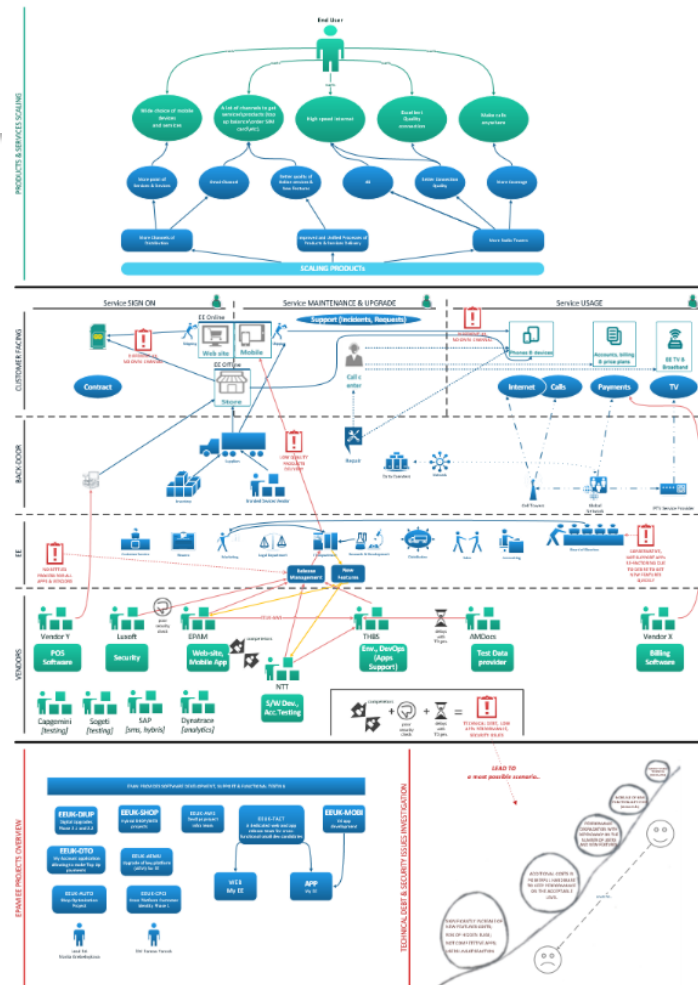
Gain creators

Pain relievers

# VALUE CHAIN

Chain of delivering value to **MobOp** end-users helped us to understand:

- what MobOp business is
- where the problems reported by Problem Owner are



EE Online

Support (Incidents, Requests)

DIFFERENT UX,  
NO OMNI CHANNEL

NO SETTLED  
PROCESS FOR ALL  
APPS & VENDORS

Customer Service

Finance

Marketing

Legal Department

IT Department

Research & Development

Distribution

Sales

Accounting

Release Management

New Features

Vendor Y

POS Software

Luxoft

Security



poor security check

EPAM

Web-site, Mobile App



competitors

NTT

S/W Dev., Acc. Testing

EEUK-AWS

THBS

Env., DevOps (Apps Support)



delays with TD gen.

AMDDocs

Test Data provider

Capgemini

[testing]

Sogeti

[testing]

SAP

[sms, hybris]

Dynatrace

[analytics]



competitors



poor security check

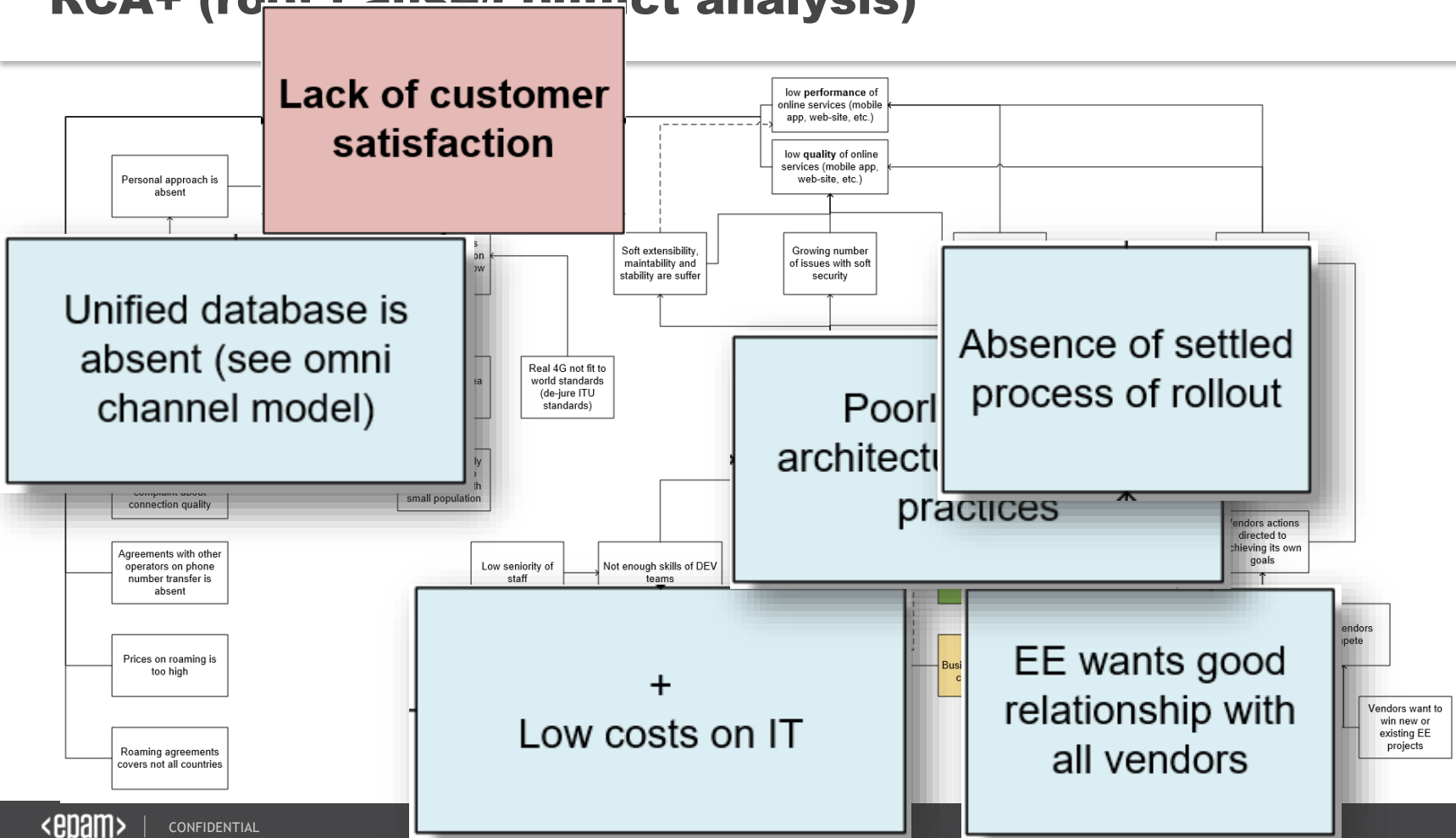


delays with TD gen.



TECHNICAL DEBT, LOW APPs PERFORMANCE, SECURITY ISSUES

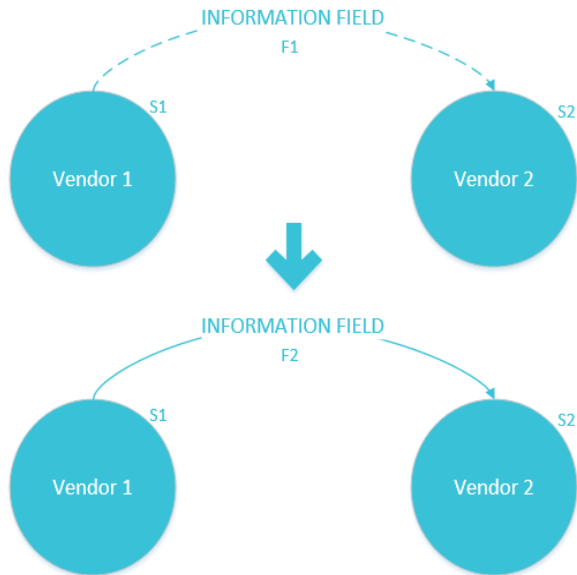
# RCA+ (root cause/conflict analysis)



# INVENTIVE STANDARDS: Interaction between vendors

## SU-FIELD MODEL & Standard 3.3

Well controlled F2 flow replaces a poorly controlled F1 flow



## AS IS

Possibility of MobOp to provide its services and products to end users is caused by effectiveness of interaction between vendors.



## PROBLEM

Interaction between vendors is not regulated and insufficient. As a result, quality of MobOp services and products is low, their delivery to end-users and further support is technically difficult and problematic



## SOLUTION

MobOp should replace a poorly controlled flow, which provides the interaction between customers, with a well controlled flow. The most suitable approach to rework is usage of ITIL principles (SLA and OLA)



# HIGHLIGHTS

- 1 Need to establish the process of software **Vendors** collaboration with certain specification of segregation of duties and definition of SLA
- 2 Consider “OMNI-channel” concept proposal to MobOp (united UX in usage of **Online** and **Physical** stores)
- 3 Consider another valuable opportunities proposition to MobOp in order to become software vendor #1

*(second part of our TRIZ project)*



## MOBILE APPLICATION ANALYSIS

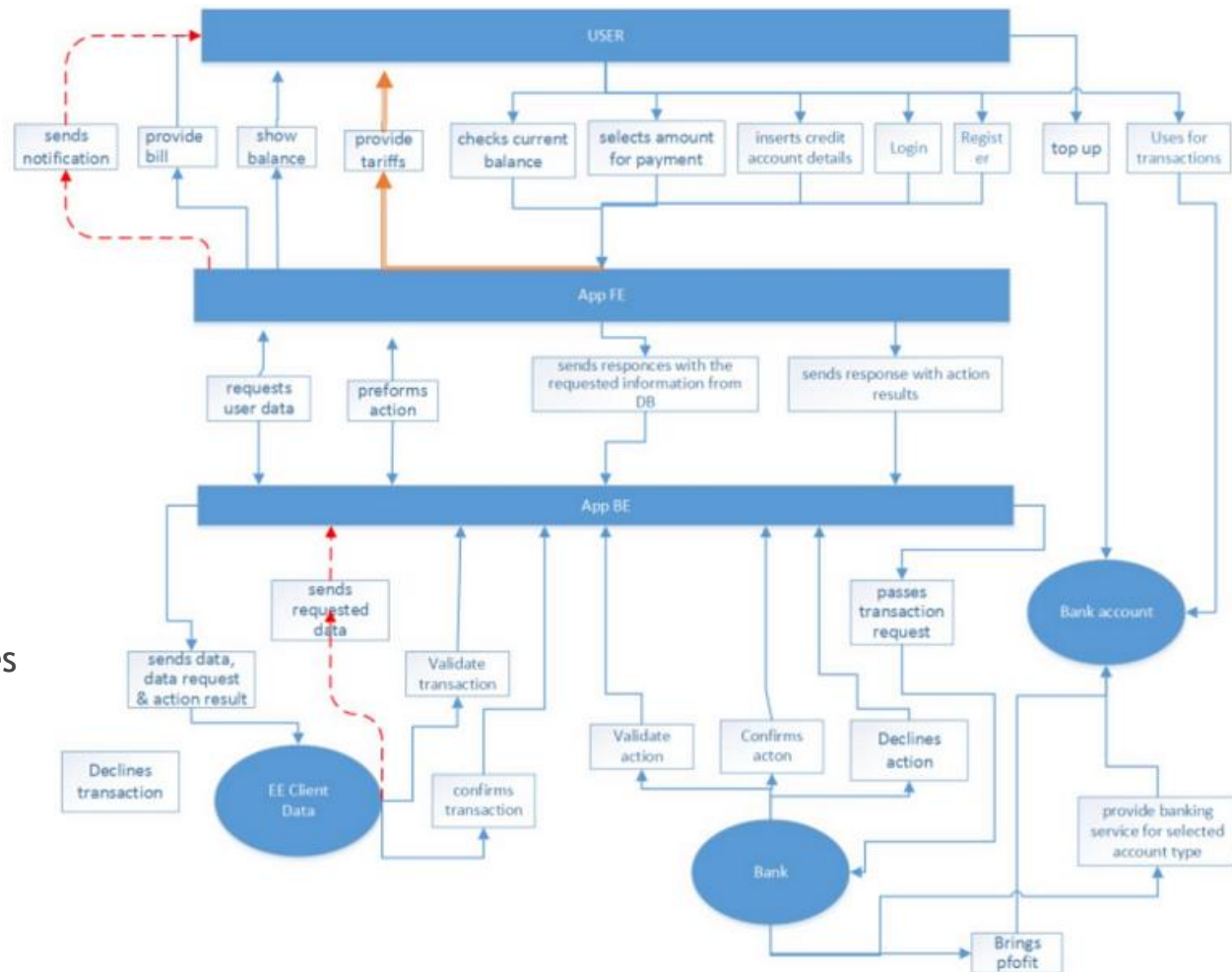
# LOOKING FOR PROSEPECT OF MY MOBOP APP

The second part of our research was dedicated to seeking of opportunities in **My MobOp** mobile application. The purpose is to find something that can be relatively cheaply implemented (or POC created) but will bring an additional value to MobOp business and will present EPAM as not just a **SOFTWARE VENDOR** but as a **STRATEGIC PARTNER** who could help MobOp to drive their business.



## PROBLEMS LIST

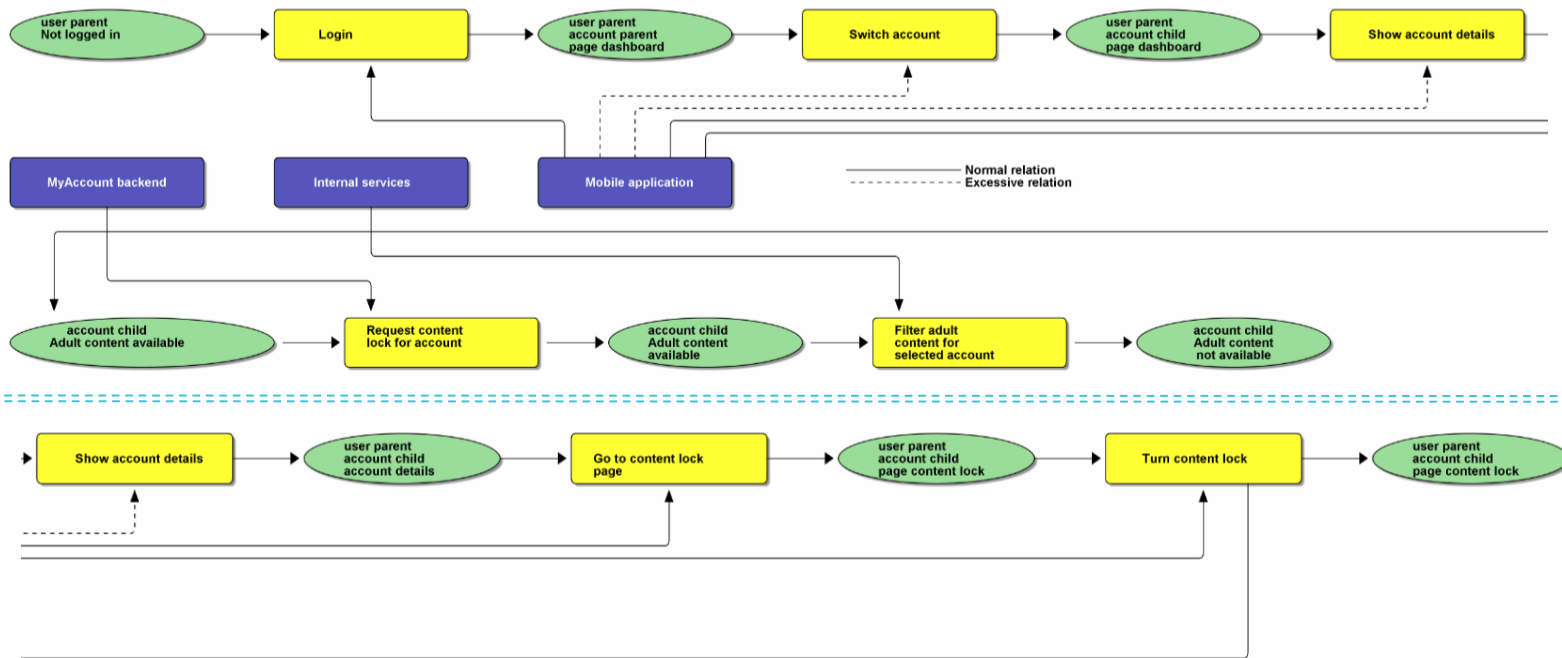
- Irritating notifications
- Too much tech information about tariffs
- MobOp Client Data (back-end) sometimes does not respond



# Functional analysis of process: *Content lock*

## DETECTED PROBLEM:

User journey for setting content lock for Child account is too long. Excessive relation - parent need to switch to child account and go to that account details.



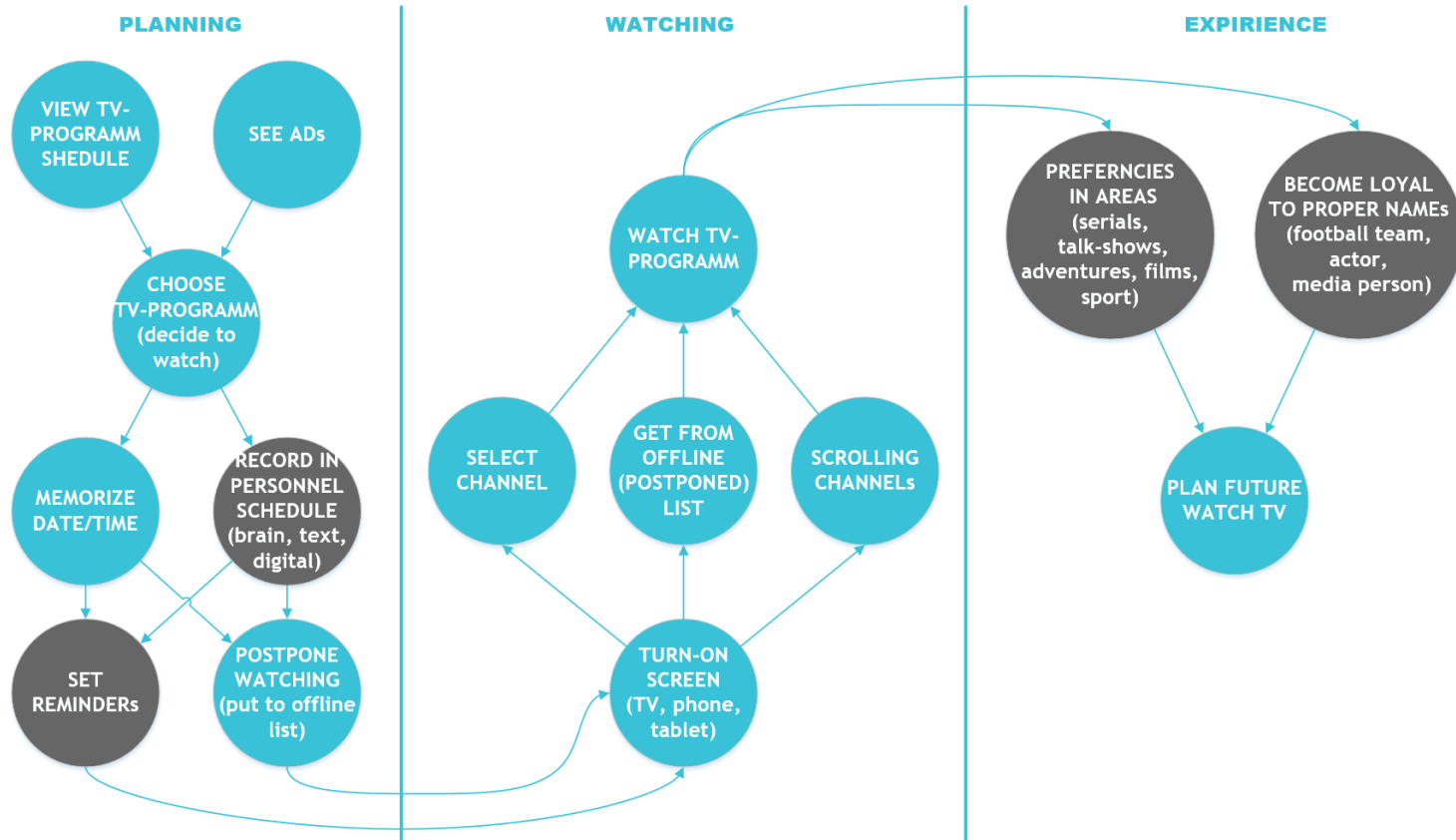
# REVERSE VALUE PROPOSITION MODEL\*

## NOT COVERED BY MY MobOp USER JOBS

- View complete list of the available services
- Set up MobOp TV notifications
- Use MobOp TV remote control
- Customize Content Lock
- Manage Home Broadband account
- View info about mobile account in wide range of dimensions

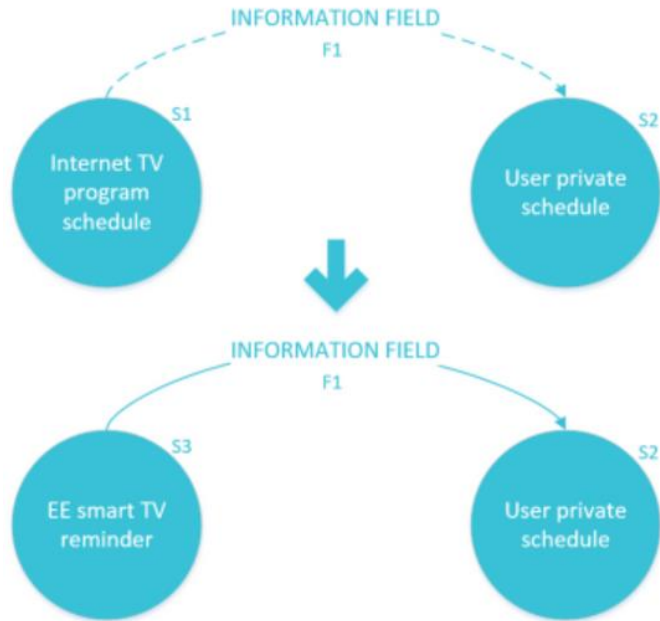
\* Reverse VPM means that we started from features of [My MobOp](#) app and mapping them to User Jobs. Then we figured out the list of uncovered in the app User Jobs

# MobOp TV Smart Reminder: user jobs scheme



# Inventive standards: MobOp TV Smart Reminder

## SU-FIELD MODEL & Standard 1.2.2 (S3 replaces S1)



- Analyze user preferences and history of watched TV program
- Suggest watching of similar TV program or TV program on the same topic/area
- Provide possibility to add into “personal schedule”
- Remind (pop-up & bip on a smartphone) about the upcoming TV program



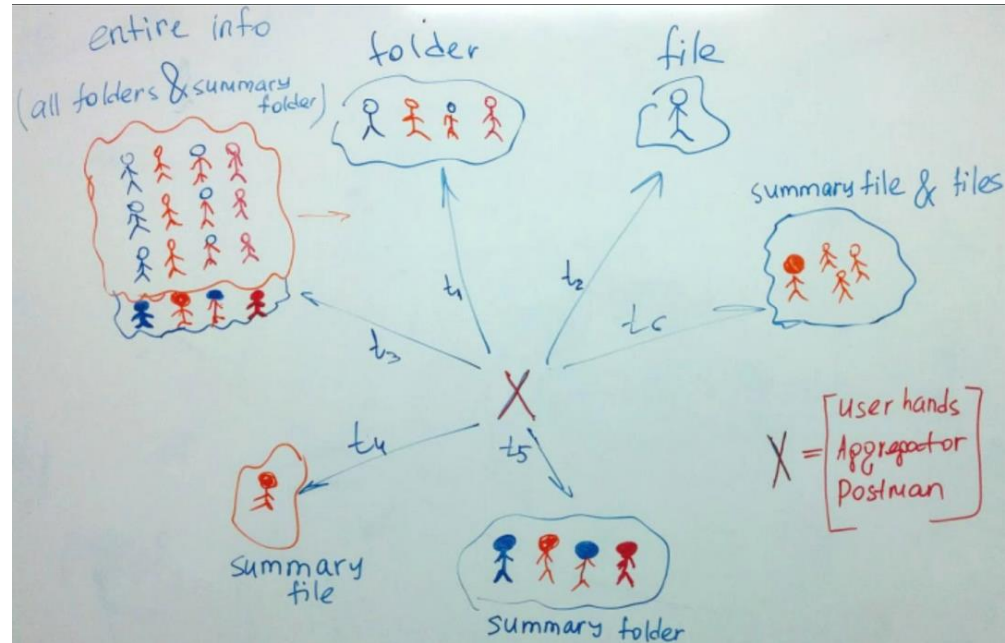
# ARIZ: Managing several Accounts (BANs, CTNs)

## INVENTIVE PROBLEM DESCRIPTION

User has to manage multiple CTNs (Customer Telephone Number) separately by switching them. Existing solution doesn't provide information in all required measures and doesn't allow to use drilldown nature to see raw and aggregated data.

## IFR (IDEAL FINAL RESULT)

**X element**, that does not complicate the system and does not force negative effects, should eliminate difficult sorting of *files* and difficult finding of required file within one *room* and within partly intersected time and at the same time keep ability to find any slice of information and possibility to analyze.

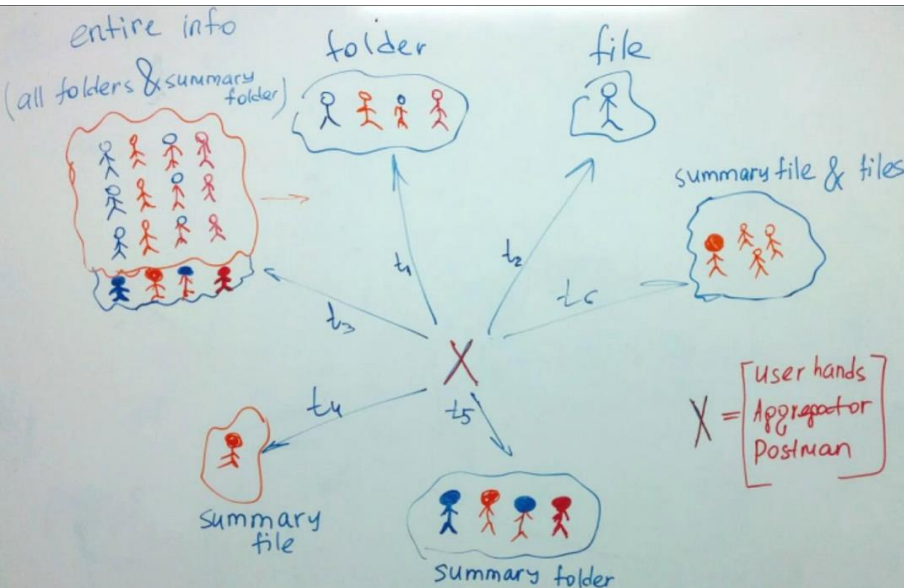


switching to abstract layer gives us the possibility to solve general problem instead of specific one

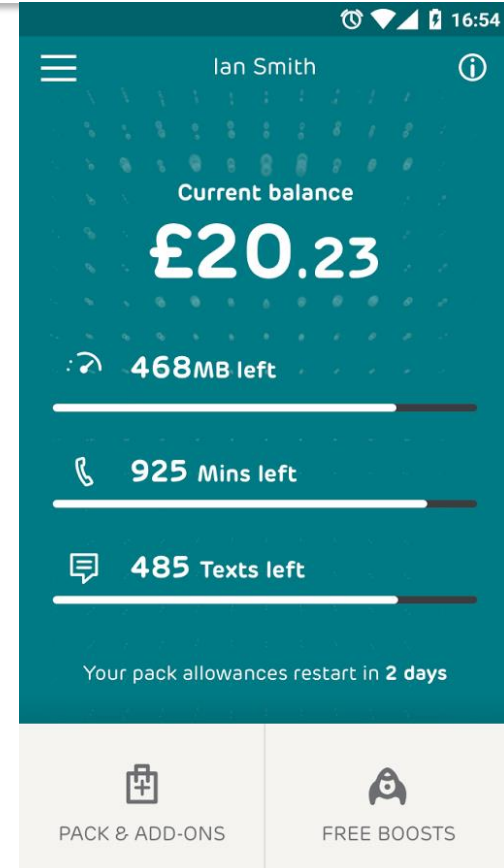
# ARIZ: Managing several Accounts (BANs, CTNs)

## SOLUTION

Account Owner should be able to make errands to app on receiving info about CTNs metrics [£, Mb, Mins, Texts] in different dimensions. App should provide this info and make aggregations, if required.



In addition to possibility to aggregate info on the CTNs level it should be possible to do that on the level of BANs.

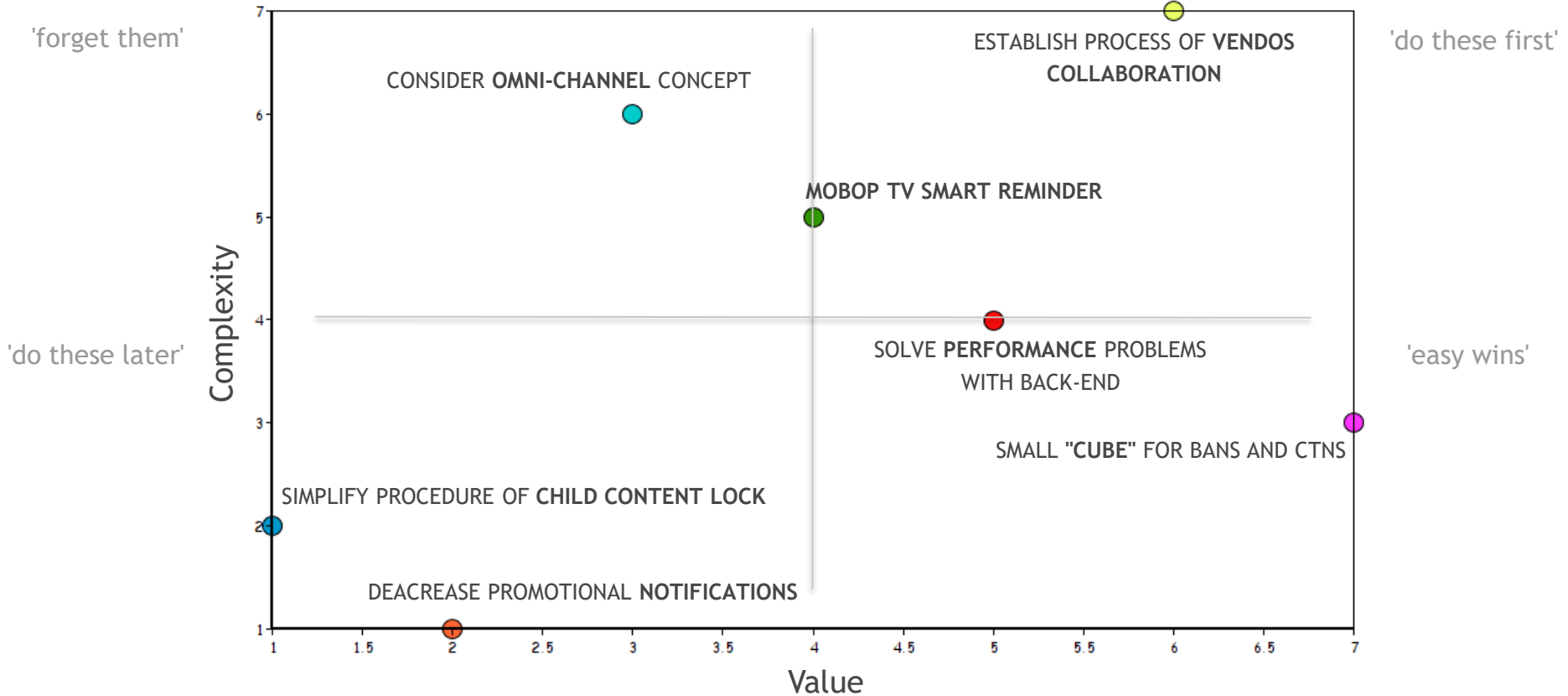


# HIGHLIGHTS – advice for **My MobOp** app

- 1 Consider decreasing of promotional notifications
- 2 Solve performance problems with back-end
- 3 Simplify procedure of **Child Content Lock**
- 4 Introduce learning UX of TV usage via implementation of **MobOp TV Smart Reminder**
- 5 Develop a small “**CUBE**” to allow group info [**£, Mb, Mins, Texts**] by *BANs* and *CTNs* with possibility to drill-down to particular CTN



# OPPORTUNITIES PRIORITIZATION





Thank you