

AllThingsTalk Home Control

Fifth-play opportunity for operators

Your opportunity

STATE OF THE MARKET

You made phone, tv, mobile and internet a commodity

You can make **Home control** your next commodity:

- Capture the benefits of the IoT market, voice assistants, home intelligence

- Increase client stickiness

Home automation is not yet mass adopted

- Users find existing systems complex, expensive and unreliable

- Systems are not on par with latest smart/voice enabled devices

- Users have a plethora of apps and remote controls

Research example from [University of Twente](https://www.utwente.nl/en/research/2018/01/01/home-automation/), Netherlands



OPPORTUNITY

Home control - your 5th play

HOW?



Home Control

What does the home user want?



AFFORDABLE TO BUY & USE

The cheaper the
better

Freemium model



SIMPLE & SUPPORTED

Easy to setup &
use. Always works

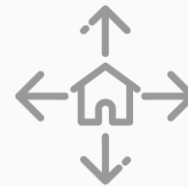
Great support



FUTURE PROOF

Compatible with
new Smart devices

Voice-enabled



OPEN & PORTABLE

No lock-in from a
platform vendor

BYO Home control

LOW PRICE AND UNMATCHED CUSTOMER EXPERIENCE ARE FAR MORE IMPORTANT
THAN SECURITY & PRIVACY, BUT NOBODY LIKES BURGLARS AND HACKERS OF COURSE



Home Control

What do Operators want?



CONTROL THE ECOSYSTEM

A future-proof foundation to monetize Home Control as an Operator's fifth-play



OWN THE HOME + USER DNA

Create the configuration of the home, together with the user



LAUNCH FAST & CONTROL RISK

Launch as soon as possible. Measure & learn fast without breaking the bank



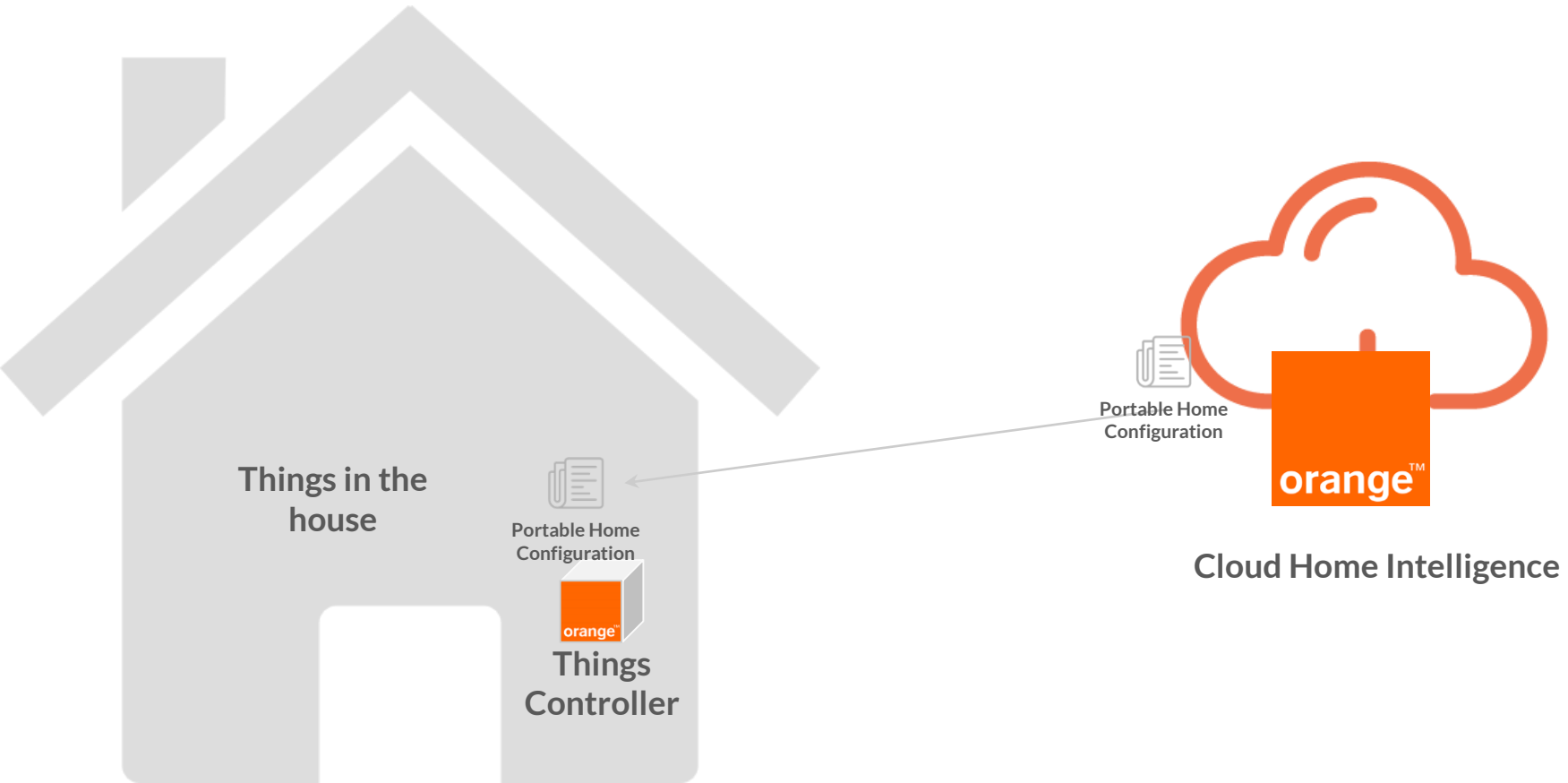
REVENUE GROWTH PATH

Make money on capabilities such as home surveillance, energy control & care

DELIVER THE **ADDED VALUE OF THE THINGS**, NOT THE THINGS THEMSELVES



Concept



ALLTHINGSTALK HOME CONTROL

DISTRIBUTED SOFTWARE

Ultra lightweight + Stable at the same time

Timeless/Future proof

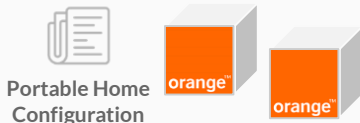
Configurable, extendable

HOME

- ☐ One or more modular **Things Controllers** per Home
 - ☐ Run on modem or low-cost Linux device
 - ☐ Installed by field-services partners
- ☐ Run the **network-critical functions**
- ☐ Dual/backup connectivity (fixed + Mobile)
- ☐ Have **local drivers** for all new smart as well as existing things (HVAC, SONOS, Hue, IKEA Tradfri)
- ☐ Large set of **functional Apps** (climate, light,...)
- ☐ Hold the **user credentials**

CLOUD

- ☐ **Core services**
 - ☐ Edge monitoring, configuration and support
 - ☐ Web services: Dropbox, Weather, OneDrive, iCloud, Text-to-speech, ...
 - ☐ Data storage, notifications, access management, forensics, analytics, reporting, ...
- ☐ **Operator & 3rd party Apps**
 - ☐ Home surveillance, energy control, care, ..



Things in the house



Literally any Thing:

Ikea/Tradfri, Philips Hue, ..
Amazon Echo, Ok Google, Apple-Siri, Cortana
Elderly emergency things,
LPWAN devices
Onewire sensors
iButtons
Bluetooth low energy beacons
Arduino and Raspberry PI based devices
Z Wave (via Vera), Somfy, Lutron, Vera
Netatmo, Nest, Homekit, ..
SONOS
HVAC things, ...

Things Controller



Core Apps: near real-time; even when WAN is down

- ☐ Network Monitoring/Cyber Security
- ☐ Things Deployment and Verification
- ☐ Things Sync to Cloud Intelligence
- ☐ Things Calendar Read: Things Switch, Access Authorisation, APPS Trigger & Energy Modulation
- ☐ Things Calendar Write: Notifs, APPS Trigger, User/Thing requests completion before expiry
- ☐ Voice Notifications delivery and pass other notifications to Home Intelligence
- ☐ Things Forensics Generation and Buffering
- ☐ Things Value Logic processing
- ☐ My Assistant (voice command enabling)



Driver Apps: third party gateways or bridges

- ☐ Sonos, Philips Hue, Ikea Tradfri, Vera, Lutron, Niko, Somfy, Raspberry, Arduino, Netatmo, Nest,...



Drivers Other

- ☐ IFTTT and the AllThingsTalk Maker return feed
- ☐ Text-to-Speech for Amazon, Microsoft, Google
- ☐ Onewire sensors and devices
- ☐ Bluetooth low energy, Z-wave, LPWAN, ...

Things Controller



Functional Apps

- ☐ Light Manager (Day, Away, Holiday, Room Secured, ..)
- ☐ Climate Manager (Heating / Cooling / Ventilation / Humidity)
- ☐ Access Control (generic interface to all kind of systems)
- ☐ Security Management (Fire, Burglar, Tamper, Panic) as a slave, master or hybrid
- ☐ Energy Management and Modulation: follow the things calendar instructions
- ☐ Weather Station
- ☐ Mailbox Alert
- ☐ Things Monitor: Sensor out of boundaries, Thing becomes active
- ☐ Environment Monitoring (Air Quality, CO2, gas, Noise, ..)
- ☐ Pool Management (outdoor/indoor)
- ☐ Outdoor Irrigation
- ☐ Fountain, Blinds, Screens
- ☐ Utility Use Measuring
- ☐ Cameras: limited to photo take only with email notifications
- ☐ Elderly Panic Monitoring

Cloud Home Intelligence



Core Apps

- ☐ App Management and Things-Controller deployment
- ☐ Home Configuration Management, Compilation and Versioning
- ☐ Things Sync with Things-Controller(s)
- ☐ Things Forensics and Reporting
- ☐ Notifications – SMS, LOG, Calendar, EMAIL
- ☐ Shared Things Calendar with Things Controller
- ☐ Plug-Ins with Supplier Network Services (Engie, ...)
- ☐ Billing and Usage

Functional Apps

- ☐ Energy Management and Energy Modulation
- ☐ Utility Consumption Reporting (water, hot water, gas)
- ☐ Cloud Sync for log and forensics to OneDrive, DropBox, iCloud, ...
- ☐ Home Emergency Centre, Home Surveillance (away/holiday)
- ☐ Elderly Emergency Support Centre (via plugin)
- ☐ Predictive and Diagnostic Maintenance
- + Specific Domain Apps : Care Centre, Hospital, ..

Operator Value proposition

NEW REVENUE STREAMS

Your internet modem expands into an apps-driven Things Controller
You provide Home Control via your Things Controllers in the homes
You capture 10€ to 100€ per month per home

REVENUE GROWTH PATH

You link your Cloud Home Intelligence to a network of providers and retain upsell fees

INCREASED STICKINESS

Your client retention power comes from the reliability of your things-controller and the intelligence of your cloud home offering

PROVIDE UNMATCHED CUSTOMER EXPERIENCE

You leverage your existing infrastructure and capabilities for client support, billing, diagnostics and modem repair services



Home user Value proposition

FREEDOM AND FLEXIBILITY

I buy the things I want and link them with the Things Controller of my operator

I retain crucial ownership of my Home configuration:

As a homeowner, I own my things and home apps

As a tenant, I own movable things and my home apps

COMFORT AND COST SAVINGS

I get comfort, safety, lower costs and convenience from a trusted party

I can retire or interface with my legacy domotica systems through driver apps on my Things Controller with Lutron, Niko, Somfy, ..

SUSTAINABILITY

I save money and benefit from smart energy usage without complexities

I contribute to a better world with IoT Grid



Leverage what users already know

MOBILE

1. App store
1. Pay for apps purchase
2. Some apps have subscription
3. Regular Apps update
4. GSM Number transfer 2 new provider
5. OS versioning iOS, Android
6. Versions : based on memory, camera, screen
7. I can configure apps, notifications and maintain my calendar
8. Open (controlled) Apps architecture

HOME CONTROL

1. Things Controller App & Home Intelligence App Stores
2. Same
3. Same
4. Same
5. Home config transfer to new provider
6. TC versioning same principle
7. Versions linked to number of things and size of apps
8. Same, but I may have an additional Things calendar
9. Same

Leverage what we know best

AIITHINGSTALK + OPERATOR

1. We control any Thing
2. We have remote diagnostic capabilities
3. We have on-site installation and care capabilities
4. We are close to home energy and utility suppliers
5. Our customer service is serious and locally adapted
6. We are ready to partner for Home Control in a community based network

We focus on the added value of the Thing

SAMSUNG, PHILIPS, APPLE, NEST, ...

1. They SELL things
2. They have none at the edge level
3. They have none here, visit their store or support website
4. They don't know Engie, Pidpa, Lampirus, EANDIS, ENI, ...
5. They ask you to return the box in case of product issues
6. They want to do Home Intelligence themselves alone or not at all

They focus on the Thing

Business model

USER

Pays A monthly base subscription & multiple upgrade options

Gets The Things Controller(s) - buy or rent
The installation & upgrades, 24/7 monitoring and support

OPERATOR

Pays A one-off perpetual license fee + a variable fee per Edge system per month

Gets The monthly subscription fees from users
The existing version of the Edge software
The Minimal Viable Product of the Cloud Home Intelligence software
Development to adapt/enrich the system to the Operator's specific needs

ALLTHINGSTALK

Pays The development of the edge + cloud software
Further generic development for a value of 50% of all license fees

Gets A one-off perpetual license fee + a variable fee per Edge system per month



Business Proposition

We get

- ❑ a 6M€ one-off perpetual license fee for Belgian + Luxembourg territory
- ❑ a monthly device license fee of max. 1€ per Edge system

You get

- ❑ the first release of the Things Controller
 - ❑ the first release of the Edge software
 - ❑ the equivalent of 3M€ of further generic development
 - ❑ the first release of our Cloud Home Intelligence software
 - ❑ geographic exclusivity for 12 months
 - ❑ steering committee member of the AllThingsTalk Home Control User Group
-
- ❑ We advise a 150K€ organisational readiness fee which delivers a Capability Uplift plan

Attractive Financials

NUMBERS	Year	1	2	3	4	5	Total
Investments	License	€6,000,000					€6,000,000
Investments	Other capex	€6,000,000					€6,000,000
COGS	User fees	€60,000	€120,000	€240,000	€420,000	€720,000	€1,560,000
Revenues	ARPU incl Upsell	€600,000	€1,800,000	€4,800,000	€10,500,000	€21,600,000	€39,300,000
Gross profit		660,000	1,920,000	5,040,000	10,920,000	22,320,000	40,860,000
Expenses	Other expenses	€120,000	€360,000	€960,000	€2,100,000	€4,320,000	€7,860,000
Expenses	Installation cost	€250,000	€500,000	€1,000,000	€1,750,000	€3,000,000	€6,500,000
Expenses	Depreciations 7 yr	€1,714,286	€1,714,286	€1,714,286	€1,714,286	€1,714,286	€8,571,429
EBIT		(1,424,286)	(654,286)	1,365,714	5,355,714	13,285,714	17,928,571
VARIABLES	Year	1	2	3	4	5	Total
Things Controllers	Cumulative	5,000	10,000	20,000	35,000	60,000	130,000
COGS	User license/month	€1	€1	€1	€1	€1	
ARPU	Subscription/month	€10	€15	€20	€25	€30	
Expenses	Other/month	€2	€3	€4	€5	€6	
Expenses	Installation cost	€50	€50	€50	€50	€50	

Product Readiness

Things Controller

CORE

- Network Monitoring/Cyber Security
- Things Deployment and Verification
- Things Sync to Cloud Intelligence
- Things Calendar Read
- Things Calendar Write
- Voice Notifications
- Things Forensic
- Things Value Logic
- My Assistant (voice command enabling)

DRIVERS

- Sonos, Philips Hue, Ikea Tradfri, Vera, Raspberry, Arduino, Netatmo
- Lutron, Niko, Somfy, Nest,...
- IFTTT (if this then that) and the maker return feed
- Text 2 Speech for Amazon, Microsoft, Google
- 1wire sensors and devices
- Bluetooth low energy
- LPWAN

FUNCTIONAL APPS (1)

- Light Manager
- Climate Manager
- Access Control
- Security Management
- Energy Management and Modulation
- Weather Station
- Mailbox Monitoring

FUNCTIONAL APPS (2)

- Things Monitor
- Environment Monitoring
- Pool Management
- Outdoor Irrigation
- Fountain, Blinds, Screens
- Utility Use Measuring
- Camera
- Elderly Panic Monitoring

Cloud Home Intelligence

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- App Management and Things-Controller deployment
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- Notifications - SMS, LOG, Calendar, EMAIL
- Shared Things Calendar with Things Controller
- Plug-Ins with Supplier Network Services (Engie, ...)
- UI for PHCF
- Billing and Usage

FUNCTIONAL APPS

- Energy Management and Energy Modulation
- Utility Consumption Reporting (Water, Hot Water, Gas, other)
- Cloud Sync for log and forensics to Users OneDrive, Dropbox, iCloud
- Home Emergency Centre, Home Surveillance (Away/Holiday)
- Elderly Emergency Support Centre (via Plugin?)
- Predictive and Diagnostic Maintenance
- Blob Post Intervention File

DOMAIN APPS

- Care Centre, Hospital, ..

MAYBE APPS : Cleaning Planning, Groceries Shop list, Insurance Assist, Car IoT, Automated Animal Feeding, GeoFencing, Selfie IoT

LEGEND

- : Completed
- : Under Development
- : To Be Started

Minimum Viable Product

Things Controller

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- Network Monitoring/Cyber Security
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LEGEND

- Completed
- Under Development
- To Complete

Summary and next steps

WHY ALLTHINGSTALK?

- ☐ Many things and people talk, but we do more and we have a product
- ☐ Time is now and you have to be the first to set market expectations
- ☐ ThingsTalk is our business since 2013 and we master the technology
- ☐ We are small and do not suffer from “the legacy from yesterday”

NEXT STEPS

- ☐ Letter of Intent
- ☐ Demonstration Home setup
- ☐ Visit our NDA data room and checkout our Home Config Language and existing reporting
- ☐ Agree on budget/timing for Capability Uplift plan



MAKE IOT IDEAS HAPPEN

© 2018 ALLTHINGSTALK
www.allthingstalk.com

info@allthingstalk.com

@allthingstalk



Building blocks of AllThingsTalk

The Portable Home Definition File (PHDF)

- ❑ Defines the Home, Things, Apps and the link between Things and Apps
- ❑ Captures all notification wishes and feeder channels
- ❑ Runs on many supplier's controllers, just like a pdf does

Apps, Drivers, Notifications and Value Logic

- ❑ Apps are complete integrated solutions; the AllThingsTalk platform is the basis for Cloud Home Intelligence apps
- ❑ Apps create Virtuals, which make it easier to configure the system
Example: "Internet lost" is a Virtual from the 'Network controller app'
- ❑ User-defined Notifications deliver email, sms, voice, calendar, logging
- ❑ Value Logic is a user-friendly way to deliver a payload to a Thing
- ❑ Drivers provide functional richness for predefined Things
Example: the Dropbox driver sets the path on Dropbox where files need to be stored