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P2C – Prevention to Care

Promoting healthy lifestyles and nutritional awareness through mobile games and technologies

TeDH Team
Technology & Design for Healthcare

Speaker
Giuseppe Andreoni

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P2C - Prevention to Care: WHY

- The rapidly increasing prevalence of overweight and obesity among children and adolescents reflects a global 'epidemic' worldwide.
- Due to the associated serious medical conditions, it is estimated that obesity already accounts for up to 7% of healthcare costs in the EU.
- Obesity in younger age groups has been recognized as an alarming key predictor for obesity in adulthood.

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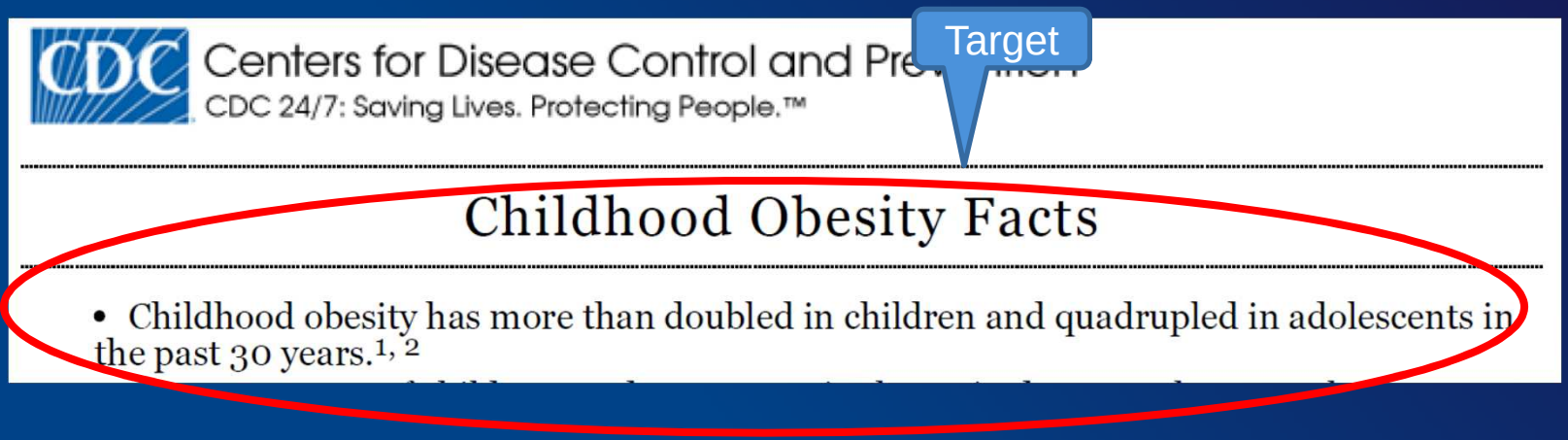
P2C - Prevention to Care: WHY



Page last reviewed: November 11, 2015

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P2C - Prevention to Care: WHY

A WHO recognized priority

World Health Organization

Health topics | Data | Media centre | Publications | Countries | Programmes | About WHO | Search

Global Strategy on Diet, Physical Activity and Health

- Global Strategy on Diet, Physical Activity and Health
- Development of the Global Strategy
- Childhood overweight and obesity
- Documents and publications
- Related links

Commission on Ending Childhood Obesity

iStockphoto

May 2014 -- To gather the best possible advice on dealing with the crisis of childhood obesity, WHO's Director-General has established a high-level Commission on Ending Childhood Obesity. Tackling childhood obesity now represents an important opportunity to reduce the impact of heart disease, diabetes and other serious diseases in future – while immediately improving the health of children.

Who

Read more about the Commission on Ending Childhood Obesity

Diet and physical activity

Commission on Ending Childhood Obesity

Diet and physical activity: a public health priority

How

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P2C - Prevention to Care: WHO

Teenager

Aged 11-17 yrs

Rebel generation
Digital generation
Education needs

Prevention could start here..

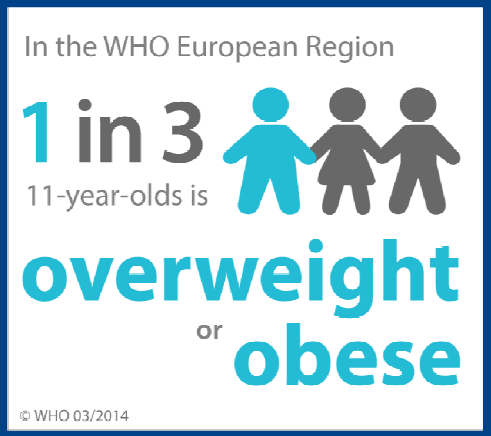
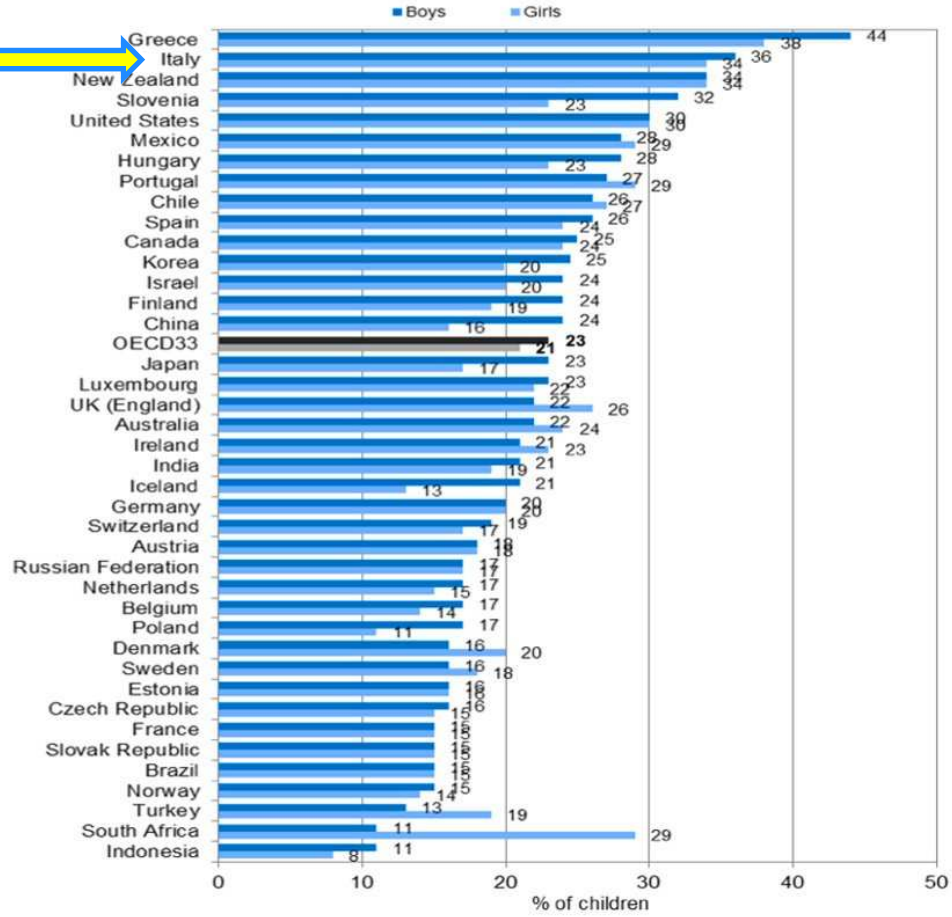


Figure 4. Measured overweight (including obesity) among children aged 5-17, 2010 or nearest year



Source: International Association for the Study of Obesity, 2013; Bös et al. (2004), Universität Karlsruhe and Ministères de l'Education nationale et de la Santé for Luxembourg; and KNHANES 2011 for Korea.

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P2C - Prevention to Care: GOAL

- promoting **sustainable behaviours** geared towards achieving healthy lifestyles.
- Behaviour-change techniques are applied as a preventative measure to accomplish positive behaviour change outcomes.

- A **behaviour change platform** targetting teen agers in **preventing obesity** and related comorbidities

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Action Plan for implementation
of the European Strategy for the Prevention
and Control of Noncommunicable Diseases
2012–2016

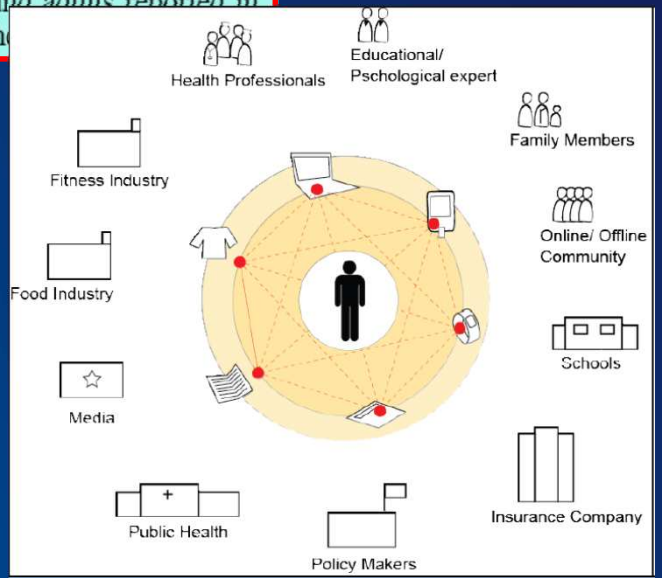
Although diverse chronic NCDs all deserve proper attention, a group of four diseases (cardiovascular diseases, cancer, diabetes, and chronic respiratory diseases) and their shared risk factors (tobacco use, harmful use of alcohol, physical inactivity and unhealthy diet) account for the majority of preventable disease and death in the WHO European Region. These four NCDs also share common determinants that are influenced by policies in a range of sectors, from agriculture and the food industry to education, the environment and urban planning. They share common pathways for interventions through public policy. Additionally, obesity merits specific attention, in that it is both a result of many of the same basic risk factors and a cause of other NCDs.

Marketing of processed food, with its "hidden" sugars, salt and excessive saturated fats, especially to children, and their increased availability are contributing to the alarming increase in the prevalence of overweight and obesity among children and adults reported in Europe, particularly for those with a lower socioeconomic status. Alcoh

World Health Organization
Europe

Agriculture
Food Industry
Schools
Policy makers

Stakeholders



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P2C - Prevention to Care: HOW

There's One Thing You Should Never Tell Overweight Teens

By JOSEPHINE MARCOTTY, Star Tribune

If you want your overweight teenagers to slim down, whatever you do, don't tell them to go on a diet. That most likely will make matters worse

P2C always starts with a positive approach/message. This is the only winning strategy with teenagers.
Above all in prevention and not pathology!!!
Engagement and gaming strategies and participation has demonstrated a powerfull strategy during our development

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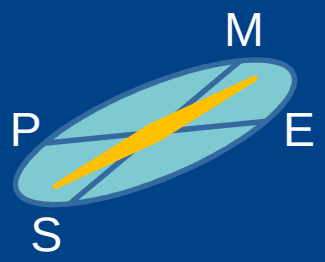
P2C - Prevention to Care: HOW

Approach

A positive message and tool dedicated to teenagers, for improving their lives through 4 directions (like a compass):



move ⟹ active lifestyle
play ⟹ serious game, engagement
eat ⟹ food education and pleasure
share ⟹ social technology and approach

Building tour Life Compass

Application: Prevention of overweight and obesity

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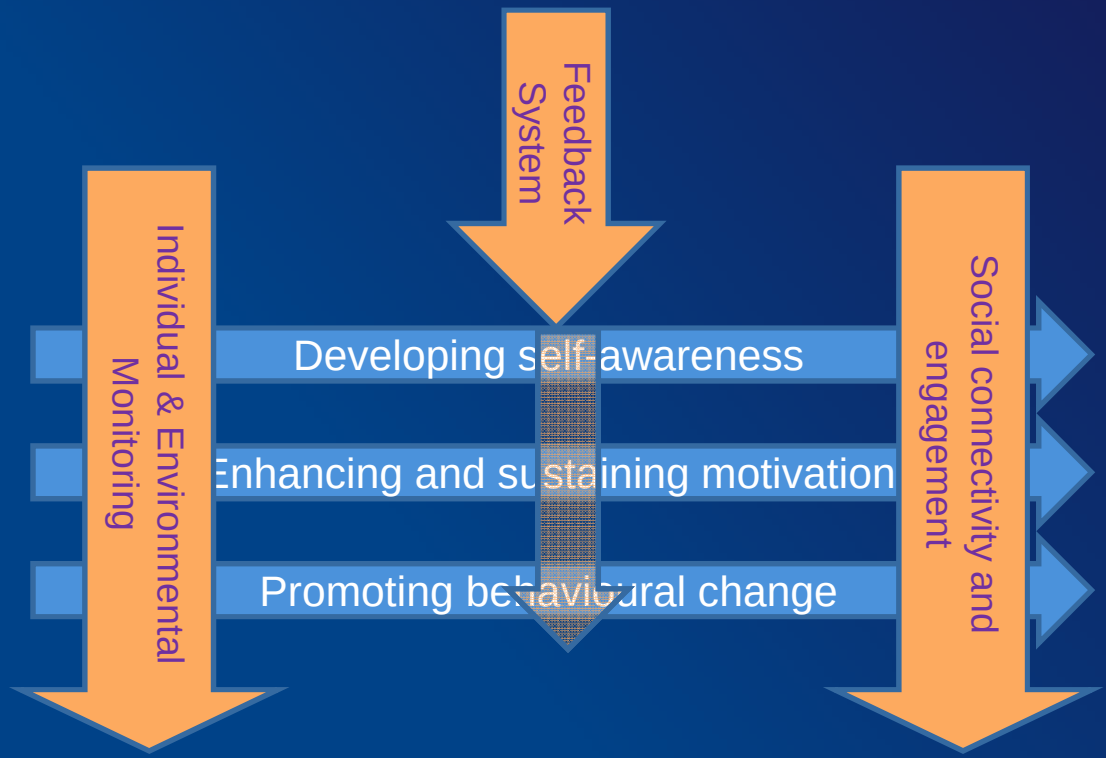

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P2C - Prevention to Care: HOW

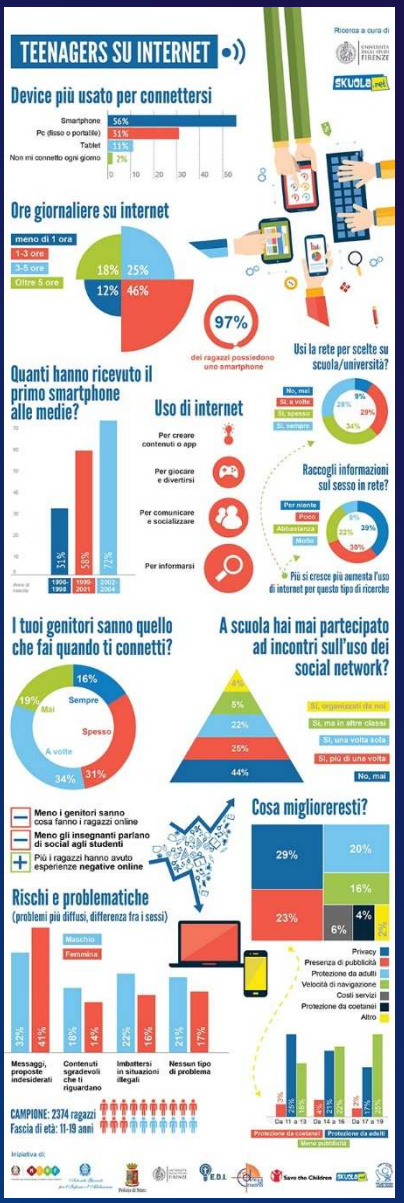
Technological platform: the smartphone.

The User Requiments defined through user participation confirms the almost 100% diffusion and the willingness to use this device as service platform.

Smartphone has become even more important than outfit

(www.wired.it, from NYT, Aug. 2014).

Safer Internet Center in Italy
Survey on 8.000 students, aged 11-13:
95% mobile/smartphone coverage.
Feb. 11, 2015



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P2C - Prevention to Care: HOW

Wearable system for non intrusive monitoring are the emerging trend technology.

Accepted by end-user and teenager in particular.

Wearables for teens are nothing like the boring calorie counters marketed to adults. Instead, a whole new breed of wearable tech is emerging that that is targeted at helping young people do the things they want to do, like **play, game, and relate**. Tapping into and extending imagination, and engaging social behavior, wearable technology for teens could have a huge impact on the teen-focused **gaming and entertainment** industries.

Serious Games are becoming and diffusing as a new tool for learning, training and improvement. Also this choice seems to be winning.

February 17, 2015

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Scopri come puoi risparmiare sulla polizza auto.
TARGA | DATA NASCITA | GG/MM/AA | Quota

THE BLOG — *Featuring fresh takes and real-time analysis from HuffPost's signature lineup of contributors*

HOT ON THE BLOG: Gary Hart, Harry Shearer, Jeffrey Sachs, Randi Weingarten

Carrie Yury
Head of Research, BeyondCurious, Artist

Betting On Teens In Wearable Tech

Posted: 07/31/2014 6:13 pm EDT | Updated: 09/30/2014 5:59 am EDT

30 | 22 | 78 | 0 | 0

Disney, Mattel, Xbox, and PlayStation take note; wearables for teens are here, and they are about to disrupt your business.

Wearables for teens are nothing like the boring calorie counters marketed to adults. Instead, a whole new breed of wearable tech is emerging that that is targeted at helping young people do the things they want to do, like play, game, and relate. Tapping into and extending imagination, and engaging social behavior, wearable technology for teens could have a huge impact on the teen-focused gaming and entertainment industries.

The Morning Email | Technology
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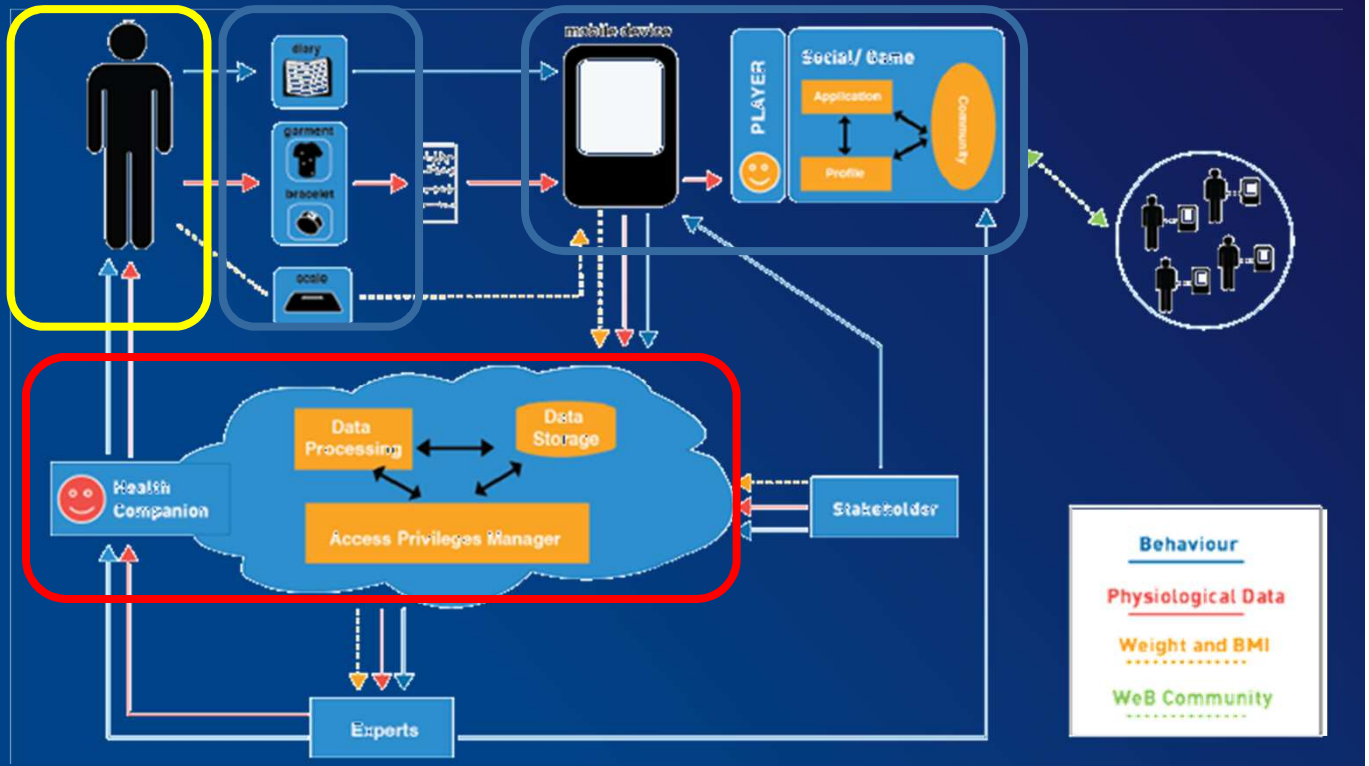
P2C - Prevention to Care: HOW

User-driven innovation: Technology as empowering tool

UCD and participatory design methodology



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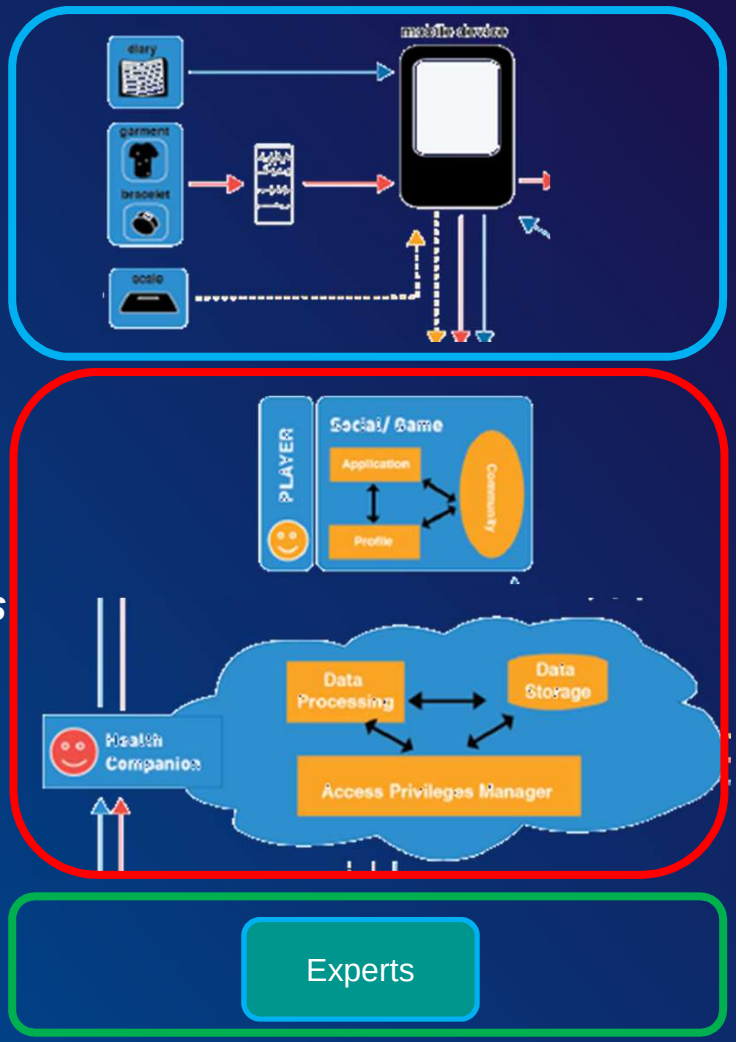
P2C - Prevention to Care: HOW

***technological layer** (multimedia diaries, embedded sensors systems, mobile & web platform)*

***services layer** (stakeholders services to provide answers to users' needs and desires in real time/not real time, from the health companion to the serious gaming and social experiences)*

***experts layer** (people from - medical/psychological/educational – disciplines to provide health companion hints*



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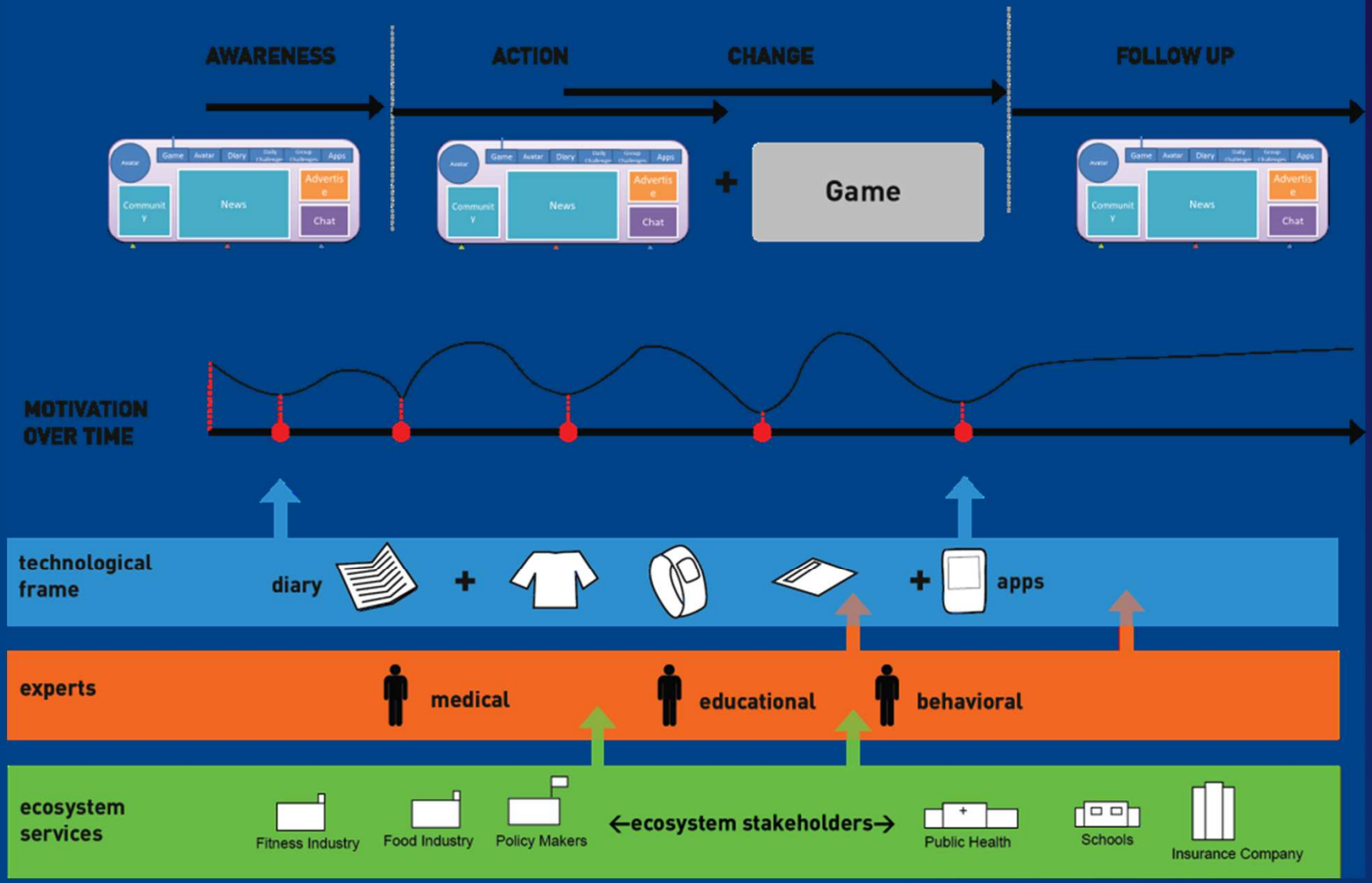
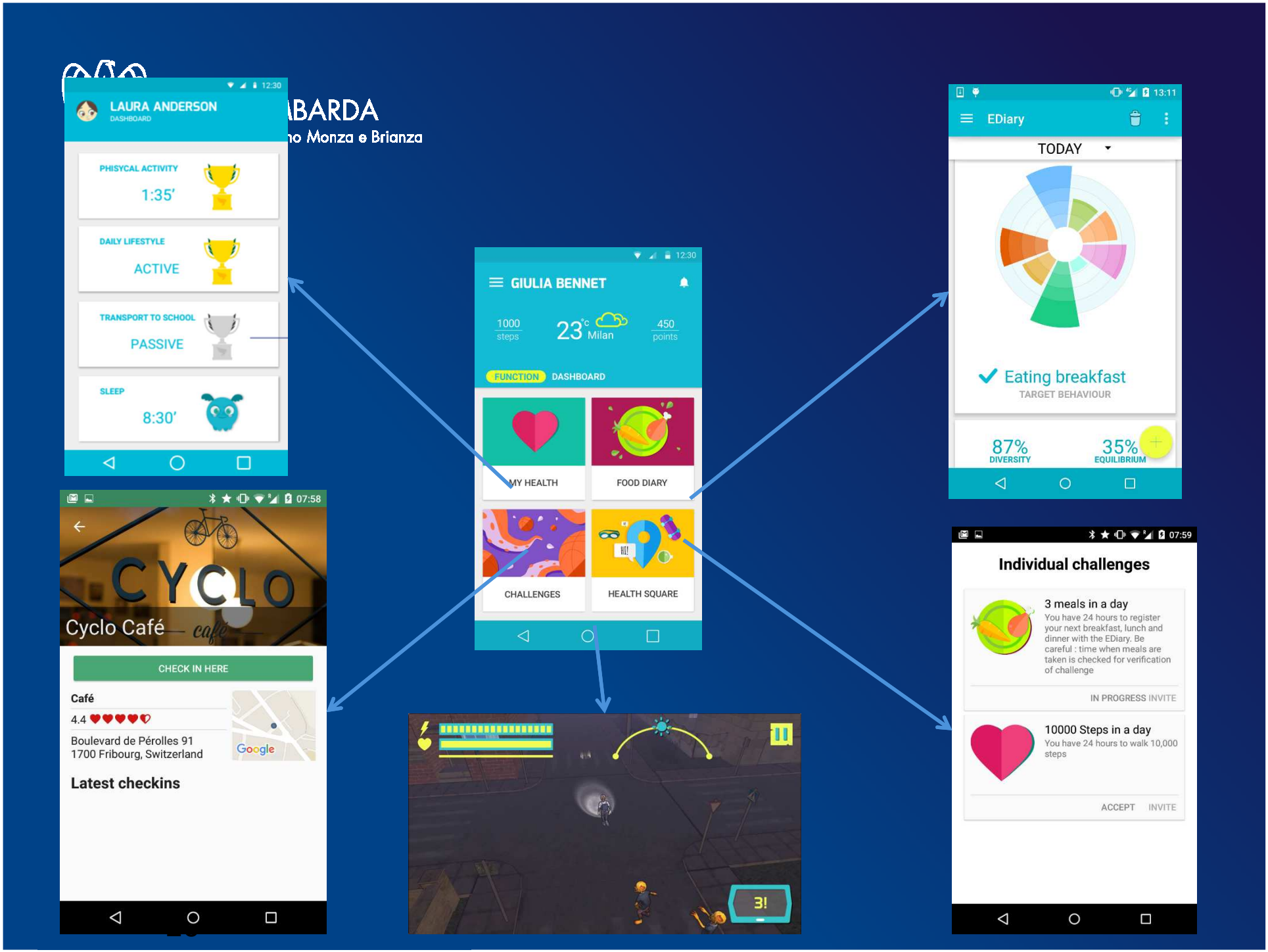
P2C - Prevention to Care: HOW

P2C System MODULARITY




LAURA ANDERSON
DASHBOARD
PHISYCAL ACTIVITY
1:35'
DAILY LIFESTYLE
ACTIVE
TRANSPORT TO SCHOOL
PASSIVE
SLEEP
8:30'
GIULIA BENNET
1000
steps
23°c Milan
450
points
FUNCTION
DASHBOARD
MY HEALTH
FOOD DIARY
CHALLENGES
HEALTH SQUARE
EDiary
TODAY
Eating breakfast
TARGET BEHAVIOUR
87%
DIVERSITY
35%
EQUILIBRIUM
CYCLO
Cyclo Café
CHECK IN HERE
Café
4.4
Boulevard de Pérolles 91
1700 Fribourg, Switzerland
Google
Latest checkins
3!
Individual challenges
3 meals in a day
You have 24 hours to register your next breakfast, lunch and dinner with the EDiary. Be careful : time when meals are taken is checked for verification of challenge
IN PROGRESS INVITE
10000 Steps in a day
You have 24 hours to walk 10,000 steps
ACCEPT INVITE

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P2C EXPECTED IMPACT

Enhancing self-awareness *of younger people for health issues and promoting behavioural changes in favour of physical activity and healthy diets*

Preventing *juvenile overweight/obesity and reducing morbidities associated to juvenile overweight/obesity in the short time, and long term health consequences*

Reducing medical, social and personal costs *associated to juvenile and adult overweight/obesity.*

Developing *a system suitable for interventions based on* ***equity*** *and* ***inclusivity***

Providing a transnational opportunity for a coordinated effort to tackle a transnational issue

Create and integrated stakeholder ecosystem and related opportunity

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P2C Team

Paolo Perego

Biomedical Engineer, PhD, research and hardware and software development for mobile application, wearable devices and human computer interface.

Carlo Emilio Standoli

Industrial designer, PhD fellow. Design for healthcare, graphic design, experience in brand and visual identity and web design.

Alessandra Mazzola

M.Sc. Education Science, Master in Forensics criminology. Experience in User Behaviour Analysis, Education and ICT, Eyetracking systems.

Roberto Sironi

Industrial designer, PhD fellow. Design for healthcare, graphic design, experience in brand and visual identity and web design.

Maria Renata Guarneri

M.Sc. Computer Science and Control Systems. Experience in Project Management& Monitoring and Exploitation of research projects to ensure that work is performed in line with the commitments and that output meets quality requirements.

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Grazie

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