User Centricity: Privacy and Security Issues

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What is User-Centricity?

• A design philosophy in which the needs and expectations of the end user of an interface are the centre of focus. ([http://www.igi-global.com/dictionary/user-centricity/31261](http://www.igi-global.com/dictionary/user-centricity/31261))

• Let your users be inspired. Give your team the tools, access, information when, where, and how they want it. ([http://www.usercentricit.com/](http://www.usercentricit.com/))
Today’s rich service offer in the World Wide Web increasingly requires the disclosure of personal user data.

Service providers’ appetite for personal user data, however, is accompanied by growing privacy implications for Internet users.

Targeting the rising privacy concerns of users, privacy-enhancing technologies (PETs) emerged.

One goal of these technologies is the provision of tools that facilitate more informed decisions about personal data disclosures.

Unfortunately, available PET solutions that protect personal user data are used by only a small fraction of Internet users.

A major reason for the low acceptance of PETs is their lack of usability.

Furthermore, most PET approaches rely on the cooperation of service providers that do not voluntarily adopt privacy components in their service infrastructures.

Addressing the weaknesses of existing PETs, this work introduces a user-centric privacy architecture that facilitates a provider-independent exchange of privacy-related information about service providers.
Human-oriented/ Citizen
Trust, Privacy and Security
- User Centricity -

Dr-Ing. Karima Boudaoud/ Dr-Ing. Mounib Mekhilef
I3S-University of Nice Sophia Antipolis-CNRS /
Gamification in the Internet of Things

Panel: User-centricity in a Smart World: Between Human Factors and the Internet of Things.
CENTRIC’15 Conference.
Inmaculada Rodríguez PhD. University of Barcelona.
The first “thing” in the IoT.

John Romkey, Simon Hackett, 1989
From now on.
Whoa! What a huge leap!

New Interaction Design (IxD) approaches.
• More and more devices
• More and more users
• More and more apps

How can some designs gain advantage over others?
• More and more devices
• More and more users/communities
• More and more apps

How can some designs gain advantage over others?

Motivational Design
Gamification is the application of game-design elements and game principles in non-game contexts.
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Challenge: Design Human-Centric experiences that focus on the motivations and rewards that truly engage IoT users.
Octalysis Gamification Framework

- Points
- Badges (Achievement Symbols)
- Fixed Action Rewards
- Leaderboard
- Progress Bar
- Quest Lists
- Win Prize
- High-Five
- Crowning
- LevelUp Symphony
- Aura Effect
- Step-by-Step Tutorial
- Boss Fights
- Virtual Goods
- Build from Scratch
- Collection Set
- Avatar
- Earned Lunch
- Learning Curve
- Protection
- Recruitment
- Monitoring
- Appointment Dynamics
- Fixed Intervals
- Dangling
- Prize Pacing
- Options Pacing
- Patient Feedback
- Count Down
- Throttles
- Moats
- Sunk-Cost Tragedy
- Progress Loss
- FOMO
- Evanescent Opportunity

- Narrative
- Elitism
- Humanity Hero
- Higher Meaning
- Beginners Luck
- Free Lunch
- Destiny Child
- CoCreator
- Milestone Unlock
- Evergreen Mechanics
- General’s Carrot
- Real-Time Control
- Chain Combos
- Instant feedback
- Boosters
- Blank Fills
- Voluntary Autonomy
- Choice Perception

- Friendiring
- Social Treasure/Gifting
- SeeSaw Bump
- Group Quest
- Touting
- Bragging
- Water Cooler
- Thank-You Economy
- Mentorship
- Social Prod

- Glowing Choice
- MiniQuests
- Visual Storytelling
- Easter Eggs
- Random Rewards
- Obvious Wonder
- Rolling Rewards
- Mischief
- Sudden Rewards
- Oracle Effect

Meaning

Accomplishment

Ownership

Social Influence

Scarcity

Unpredictability

Avoidance
- Follower Gain
- Retweets
- Responses
- Unique Information

- Character Limit
- Witty/valuable content

- Friends on Twitter
- Followers
- Responses
- Companionship
- Thank You Economy

Meaning

Accomplishment  Empowerment

Ownership

Social Pressure

Scarcity

Unpredictability

Avoidance

 Fail Whale
- Character Limit
- Follower Count

- Friend Loss

Interesting Tweets
- Surprising content
- Will someone respond?
- Quick news

Octalysis Score: 267
Marczewski’s player and user types hexad.
Thanks for hearing :)
Tanja Bos

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*Technical university Delft, The Netherlands*

1999-2015 Operator Performance researcher  
*Netherlands Aerospace Centre*

HMI design and validation  
pilots,  
air traffic controllers,  
maintenance engineers
Human factors and the Internet of Things

An everyday example

**Pros**
- Great!
- Time efficient

**Cons**
- What if you want to put back a product?
- Quite a number of cards and devices
- Potential of manipulation of buying behaviour

Dilemma: do I provide my personal details to make use of this system?