



 The old model of physical consumption – purchase, use, declare obsolete, discard – is being overturned by a new model: one founded on constant improvement, upgrade and iteration.

UPGRADIA - WHAT'S THE BIG DEAL?

Upgradia is as simple as it is challenging – products, production, business models and business processes are being prepared for lifelong upgrades, instead of replacing products when they are obsolete. The Upgradia trend has its roots in smartphones, which we upgrade constantly through app-markets. Now the trend is spreading throughout all categories of physical products, from fighter jets to bicycles and TV sets.

Upgradia provides new business opportunities...

Across a multitude of industries, Upgradia is starting to gain a foothold – and for the first time we see producers and costumers collaborating to drive the trend: Costumers have organised themselves in “maker movements”, where they take ownership of upgrading their own products in e.g. the growing network of fablabs. On the producer's side, a deeper understanding of users and their needs for new and improved functionality, not necessarily new products, is currently replacing the perception that costumers want new products faster and faster.

On this background, we see a completely new range of business opportunities forming such as these examples:

- Products that are in use for many years, without generating much income for the provider, e.g. hospital and laboratory equipment can through Upgradia be turned into income-generating assets, where the user is no longer stuck with outdated technology and large replacement costs.
- In product categories where the products traditionally have had extremely short lifespans, Upgradia enables companies to switch the competition to high-quality longer lifespan products, while maintaining or even increasing the value supplied to the costumer and creating brand loyalty.

- New multisided business models, where a multitude of firms and organisations collaborate on innovation, lowers the risk of betting on the wrong dominant design, and distributes R&D investment between multiple companies.

This is only the tip of the iceberg - we, at Danish Technological Institute (DTI), have committed ourselves to unfold the full business potential of Upgradia in close collaboration with producers and costumers internationally.

... and requires companies to build new capabilities

Embarking on the journey to Upgradia is a lot less daunting than it may sound: There is no need to go all-in from the start; quite the contrary, we see that the first movers in Upgradia are maturing in a stepwise approach, with each step adding value in itself. We like to think of these steps as different elements in the company's machine room, with the central elements being:

- A modular production and product development system,
- a product configuration system,
- high quality production,
- an innovative service organisation,
- systematic use of technology- and user need outlooks,
- ability to innovate on business models,
- efficient and systematic participation in open innovation networks.

Whew, what a mouthful! Fortunately, each of these capabilities will create real value for the company during the journey and as more and more of them are connected, the synergies are unleashed. In addition, you are not alone on the journey to Upgradia: DTI is committed to provide supportive tools for each step on the way.

EXAMPLES OF UPGRADIA ARE ALREADY ON THE MARKET



The Copenhagen Wheel – first announced by MIT's SENSEable City Lab in 2009 – became available to the public in November 2013. Cyclists replace their rear wheel with the Copenhagen Wheel, which then automatically assists with pedaling via an on-board motor. Battery power is generated from braking and cycling downhill. Users can adjust the assistance rate via the Superpedestrian cellphone app, which also collects information on congestion, air and noise pollution and road conditions.



In May 2013, Samsung released a hardware kit upgrading its 2012 smart TVs to the same interface as the brand's 2013 models. Costing USD 299, the Evolution Kit plugs into a proprietary port on the rear of compatible televisions. It allows the viewer to access an updated interface including an improved web browser, and a TV recommendation feature which 'learns' viewing preferences, in order to make personalized suggestions.



Boeing F/A-18E/F Super Hornet first flew in 1995, but due to Boeing's development strategy of "evolution rather than revolution", a "Super Advanced Hornet" is now positioned as a serious, battle-proven competitor to the new fighter jets under development. Based on feedback from end users a portfolio of physical upgrades of both stealth capabilities, weapon systems, radar systems, engine power and range has been developed which (according to Boeing) can prolong the lifespan of the fighter jets up to 40 years.



Razer are currently working on a new PC concept born as an entirely modular and easily upgradeable desktop PC, having a central tower in which modules for graphics, memory, storage are mounted and easily replaced by the end user. Although Razer are still testing market feedback before launching the product, they have revealed plans of both inviting other manufacturers to develop modules for the platform as well as leasing-based business models in which "tier 1 customers" are always ensured the newest technologies, while lower-tier-customers receive upgrades returned from higher-tier-customers.

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