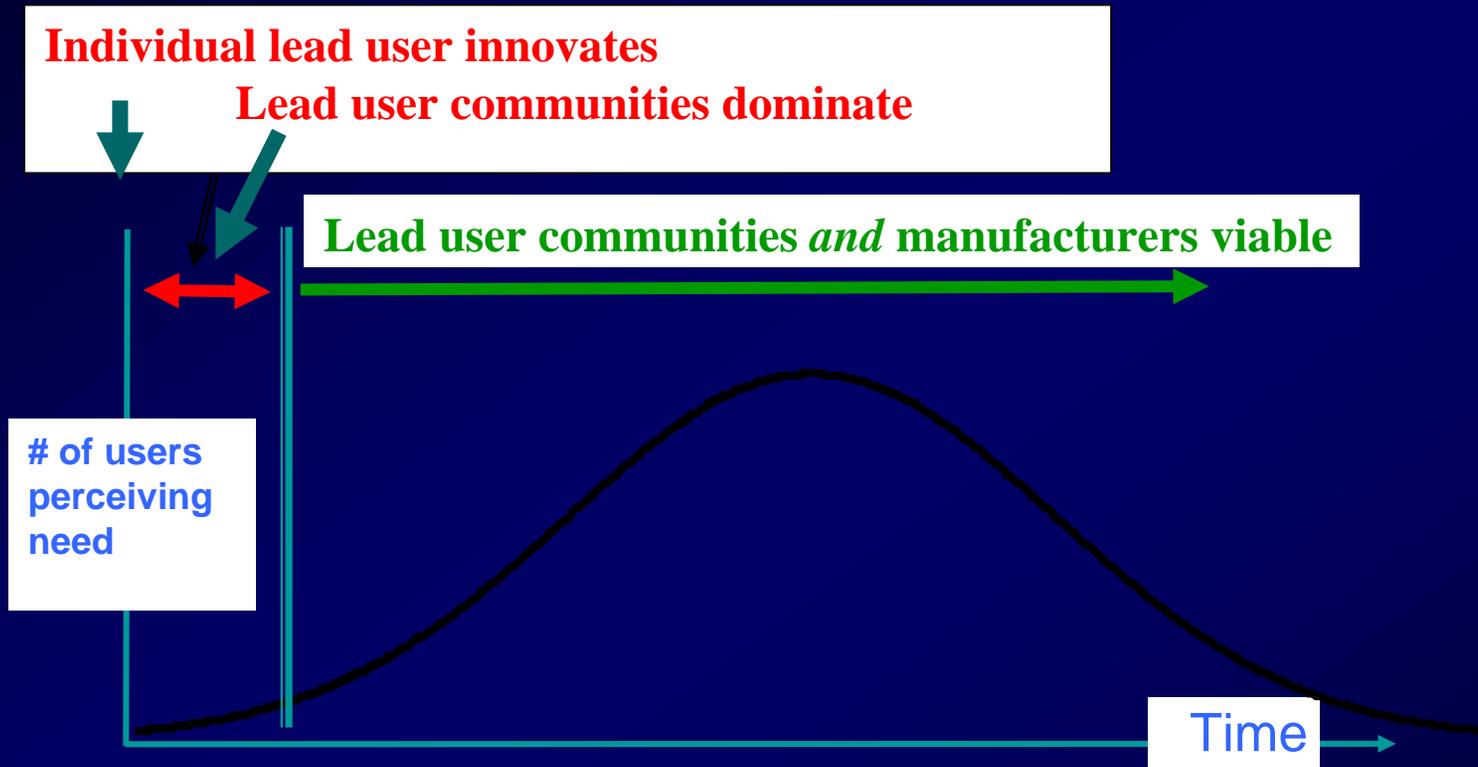# 15.352
How can manufacturers make money in a user-centric world?

Professor Eric von Hippel

MIT Sloan School of Management

MITSloan

How can manufacturers make money Competing with user innovation?

Individual lead user innovates

Lead user communities dominate

Lead user communities *and* manufacturers viable

# of users perceiving need

Time

User innovation communities can *supplant* product development by manufacturers

EXAMPLE: Zeroprestige.org

"We are interested in furthering kite-powered sport by enabling an 'open source' (shared knowledge and documentation) approach to kite-building and things kite-powered in general."

"You are encouraged to post and add comments and knowledge to any of the postings."

Users develop and post kite designs - often better than designs by kite manufacturers

EXAMPLE: Super high AR mountain board kite
"From Sebastian in Argentina..
a super high AR inflatable
design for mountain boarding…"

Posted by saul at 05:58 PM

RESULT: User Innovation Communities may drive kite manufacturers right out of product design – but not manufacturing

- **HAS BEEN** An industry of manufacturers that develop and sell kites of their own design.
- $100mm in equipment sales in 2002 – growing fast.

- **TODAY** – some firms are moving to a "build only" specialization – leaving product innovation to the user community (Firms are starting to download and build user designs instead of creating their own kite designs.)

There are many ways for manufacturers to associate with / benefit from user innovation communities

Manufacturers can:

- Sell users access to a platform for innovation
  - **Stata (statistical software language and toolkit)**
  - **Harley Davidson (customization-friendly motorcycles)**

- Sell user innovations as commercial products
  - **Red Hat (sells Linux with easy installation features)**
  - **Lead user studies find user innovations to commercialize**

- Sell products that complement user innovations
  - **IBM sells computer server hardware that mounts Linux**

Often there IS an opportunity for manufacturers to benefit from user innovation communities

Manufacturers can:

1. Aid users in tailoring standard product offerings for themselves

    Example – Harley Davidson

    Example – toolkits - Statacorp

2. Take back learning about user-developed innovations to their standard offerings

    Example – StataCorp

3. **Supply complements**

    Example – Red Hat

Statacorp has learned to integrate user-developed innovations into its commercial product on a regular basis

Self-organized user community innovates - STATA integrates best efforts

Integrate

User community

Create new modules

User modules

Attach

Core Product

New releases
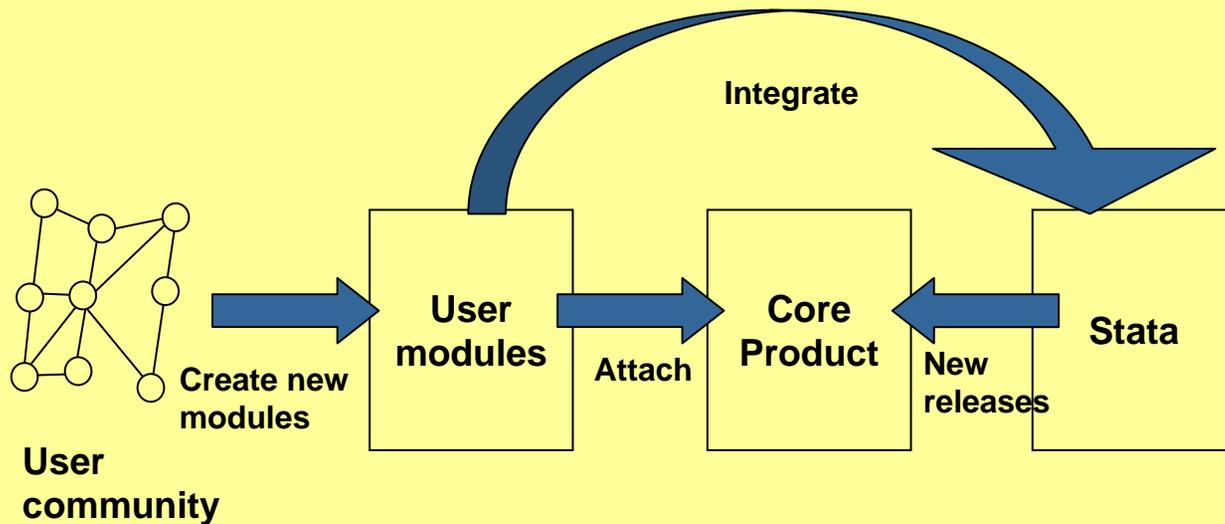
Stata

Key elements

Self organized user community

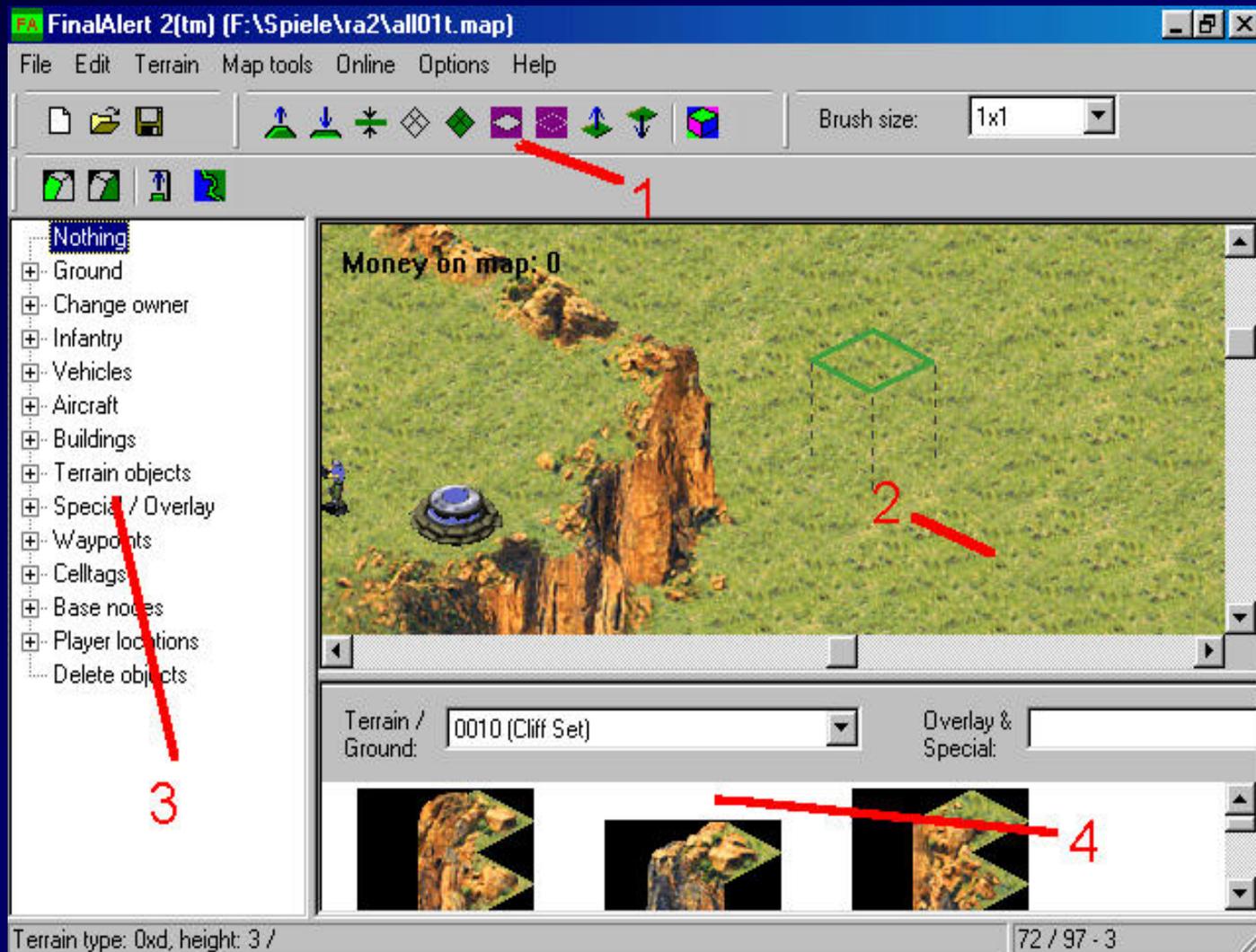High technical incentive for users to innovate on core product

Users determine lending features

Stata does QC and Lode rewrite integrates into core

Full acknowledgement of user innovators

Significant portion of STATA product based on user ideas

User-made map editor for Westwood Studios' Game Red Alert 2

On-line game firms use consumer-to-consumer support to reduce their own product support costs

Example: Westwood Studios:

•Consumer-to-consumer support is **~13 times** the Westwood official game toolkit support.

•The highest-quality support is provided by just a few users:

  •6 of the most active consumers each provide as much support as the entire Westwood contribution

  Source: Lars Bo Jeppesen

GE MRI Lead User Innovation strategy elements

- Establish Research Relationships with Key Luminaries and Institutions which give GE access to innovations they develop.

- Give users development tools

- Co-Locate Engineers and Scientists to Develop Clinically Relevant Breakthrough Technology
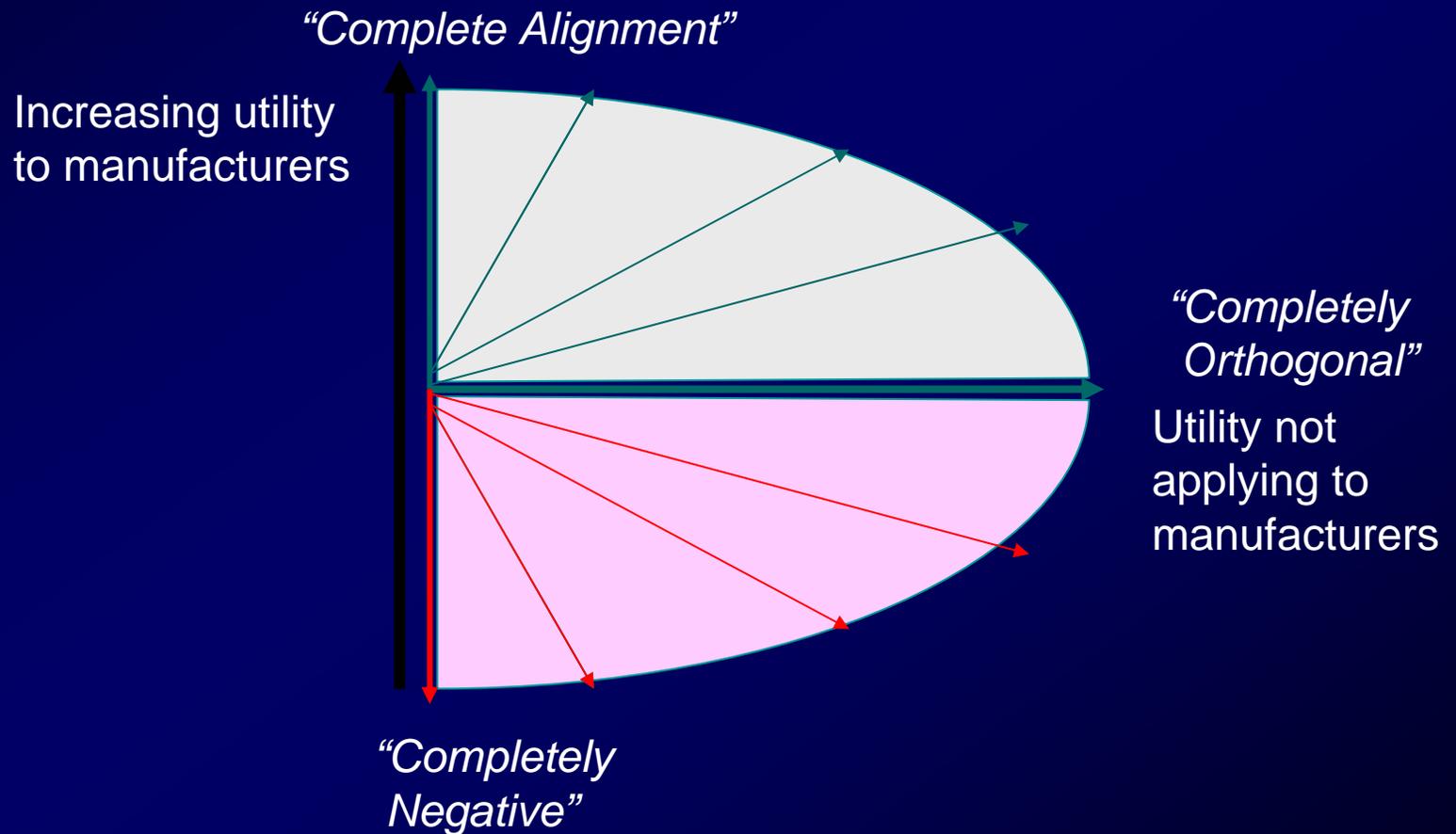
MR Application Studio

App Development Environment
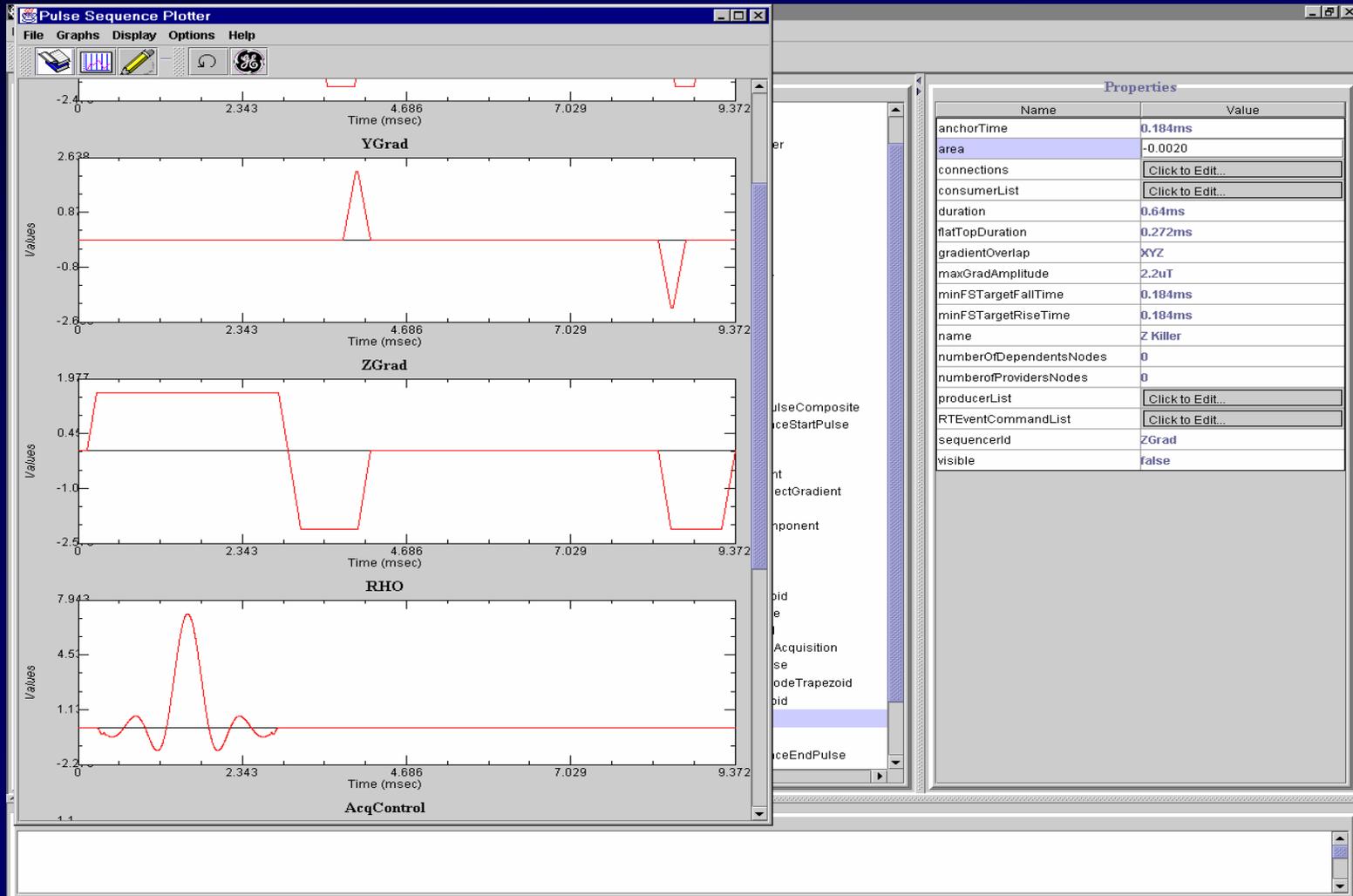
De-Centralize GE Applied Science Lab to colocate with lead user innovators

- Co-locate Engineering / Application Teams at Luminary Sites

  - Hire Industry-Best MR Talent

- Build Talent Pipeline

- Gain Expertise in Emerging Applications

- First to market with Clinically Driven Applications

- Multi-site Testing in Research Community

The interests of a user innovation community and a "host" firm may be aligned – or may not be.

"Complete Alignment"

Increasing utility to manufacturers

"Completely Orthogonal"

Utility not applying to manufacturers

"Completely Negative"

Automakers can find themselves at odds with some members of "their" user innovation communities

Users reprogram / replace their auto engine chips
to get higher performance –
Manufacturers worry about consequent warrantee costs

Policy Implications

User-centered innovation is increasing as computing and communication costs drop.

- **User-centered innovation increases social welfare. Should be supported by – or at least not discriminated against – by policy.**

  - IP is being used in ways that favor major holders (e.g., patent thickets) Since user-innovation is distributed, each innovator will have little IP – is at a disadvantage.

  - Digital Millennium Copyright Act is aimed at illegal copying – but also causes collateral damage to user innovation. Affects users' ability to modify and improve what they buy.