



## Philosophy

- Each team has the freedom to evolve their design
  - Evolve features and whole products incrementally
  - Occasionally introduce new concepts and technologies
- However
  - Since teams have so much freedom
  - There is a danger that products may become incompatible
  - They synchronize their changes frequently







## **Process: Stabilization**

Stabilization Phase Comprehensive internal and external testing, final product stabilization, and ship

Program managers coordinate OEMs and ISVs and monitor customer feedback. Developers perform final debugging and code stabilization. Testers recreate and isolate errors.

• Internal Testing Thorough testing of complete product within the company

• External Testing Thorough testing of complete product outside the company by "beta" sites, such as OEMs, ISVs, and end users

• Release preparation Prepare final release of "golden master" disks and documentation for manufacturing



Milestones in sync-andstabilize (2-4 months)

Milestone 2 (next 1/3) Development Usability Lab Private Release Testing Daily Builds Feature Debugging Feature Intergration Code Stabilization Buffer Time





## **Comparing Processes**

Synch-and-Stablize	Sequential Development
Product development and testing done in parallel	Separate phases done in sequence
Vision statement and evolving specification	Complete "frozen" specification and detailed design before building the product
Features prioritized and built in	Trying to build all pieces of a product
3 or 4 milestone subprojects	simultaneously
Frequent synchronizations (daily	One late and large integration and
builds) and intermediate	system test phase at the project's
stabilizations (milestones)	end
"Fixed" release and ship dates and	Aiming for feature and product
multiple release cycles	"perfection" in each project cycle
Customer feedback continuous in	Feedback primarily after development
the development process	as inputs for future projects
Product and process design so large teams work like small teams	Working primarily as a large group of individuals in a separate functional department