

The Basic Tradeoff and Dilemma in Product Development Organization

- **Departmental Organization**
 - Departmental structure is more closely mapped to the structure of the supporting technologies
 - It thereby provides a better connection to those technologies and better ongoing technical support to the project effort.
 - This is, however, accomplished at the cost of much greater difficulty in coordination of the project tasks and less responsiveness to market change.
- **Project Team Organization**
 - Project Team structure groups people from different disciplines together in a single team all reporting to a common manager.
 - It thereby provides better coordination of the project tasks and increased sensitivity to market dynamics.
 - This is, however, accomplished at the cost of a separation from the disciplinary knowledge underlying the project effort. When this is carried to an extreme, it will gradually erode the technology base of the organization.

Organizational Structure Space I

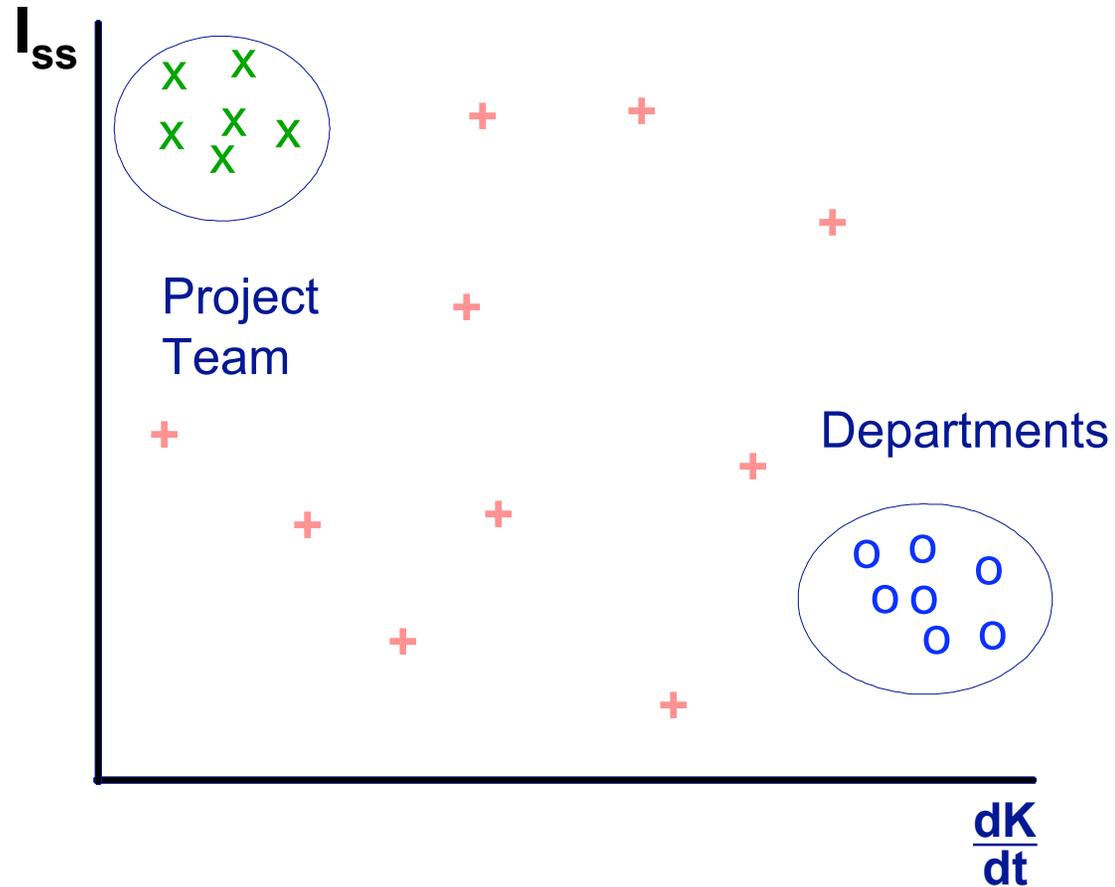
I_{ss}

$\frac{dK}{dt}$ = rate of change of
knowledge

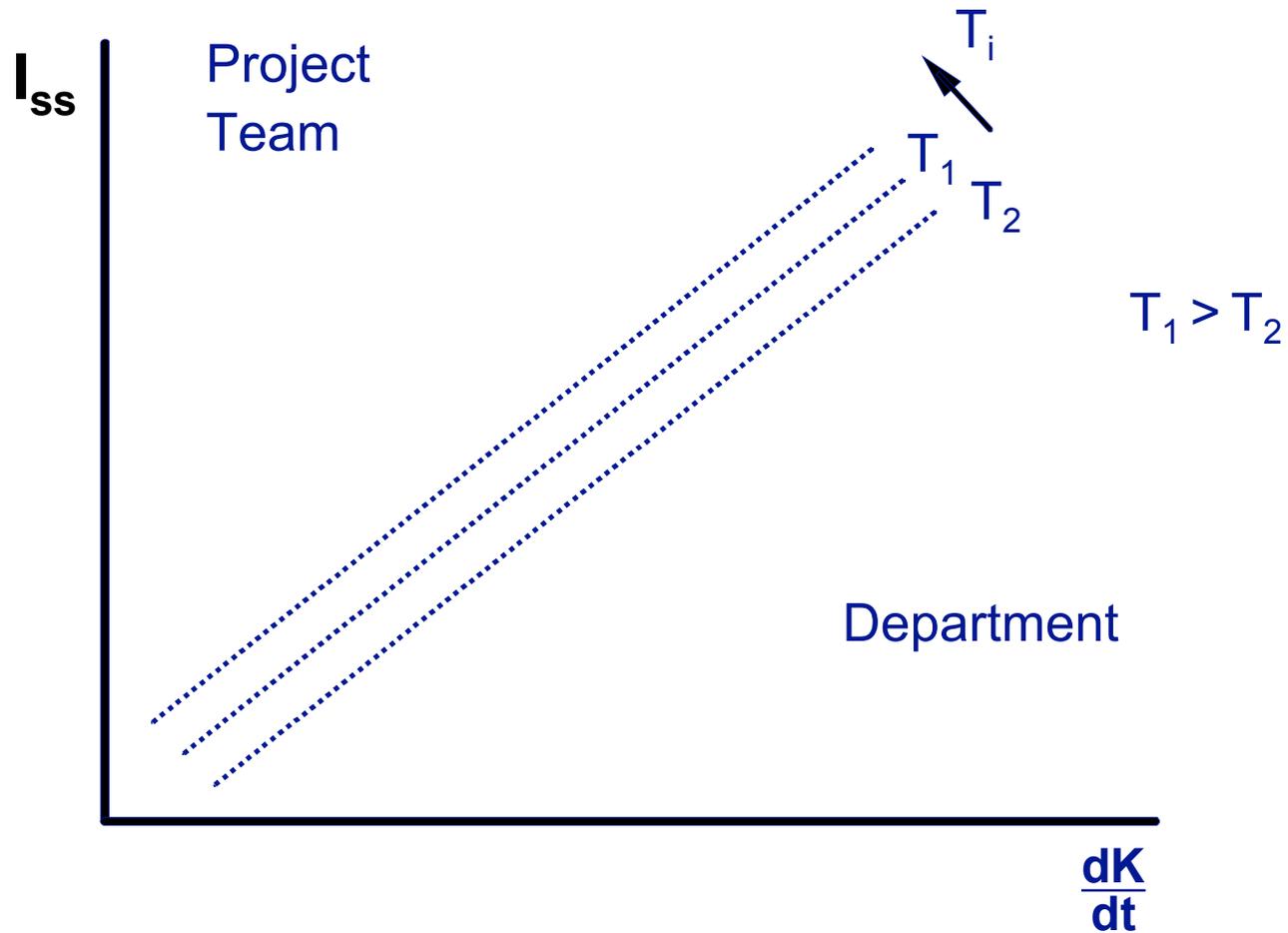
I_{ss} = subsystem
interdependence

$\frac{dK}{dt}$

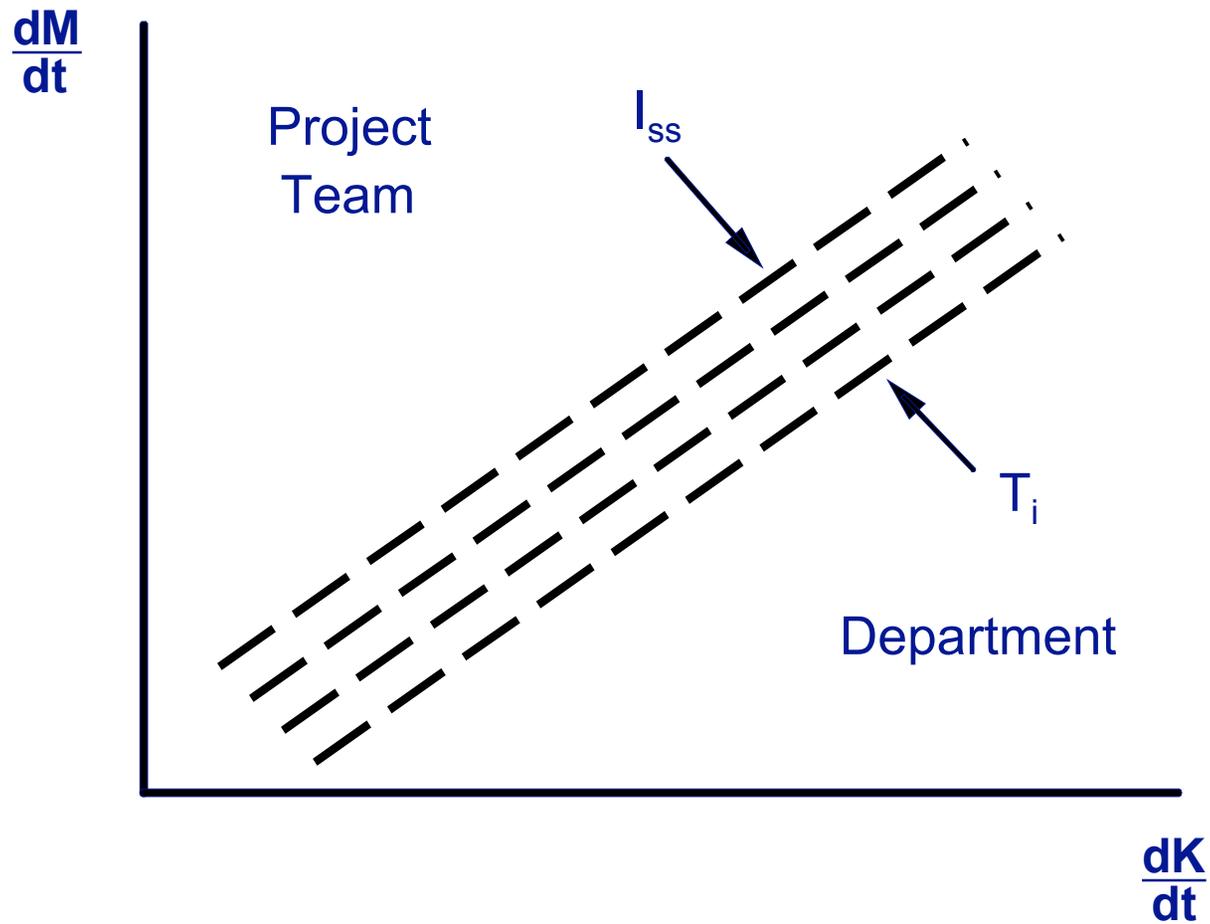
Organizational Structure Space II



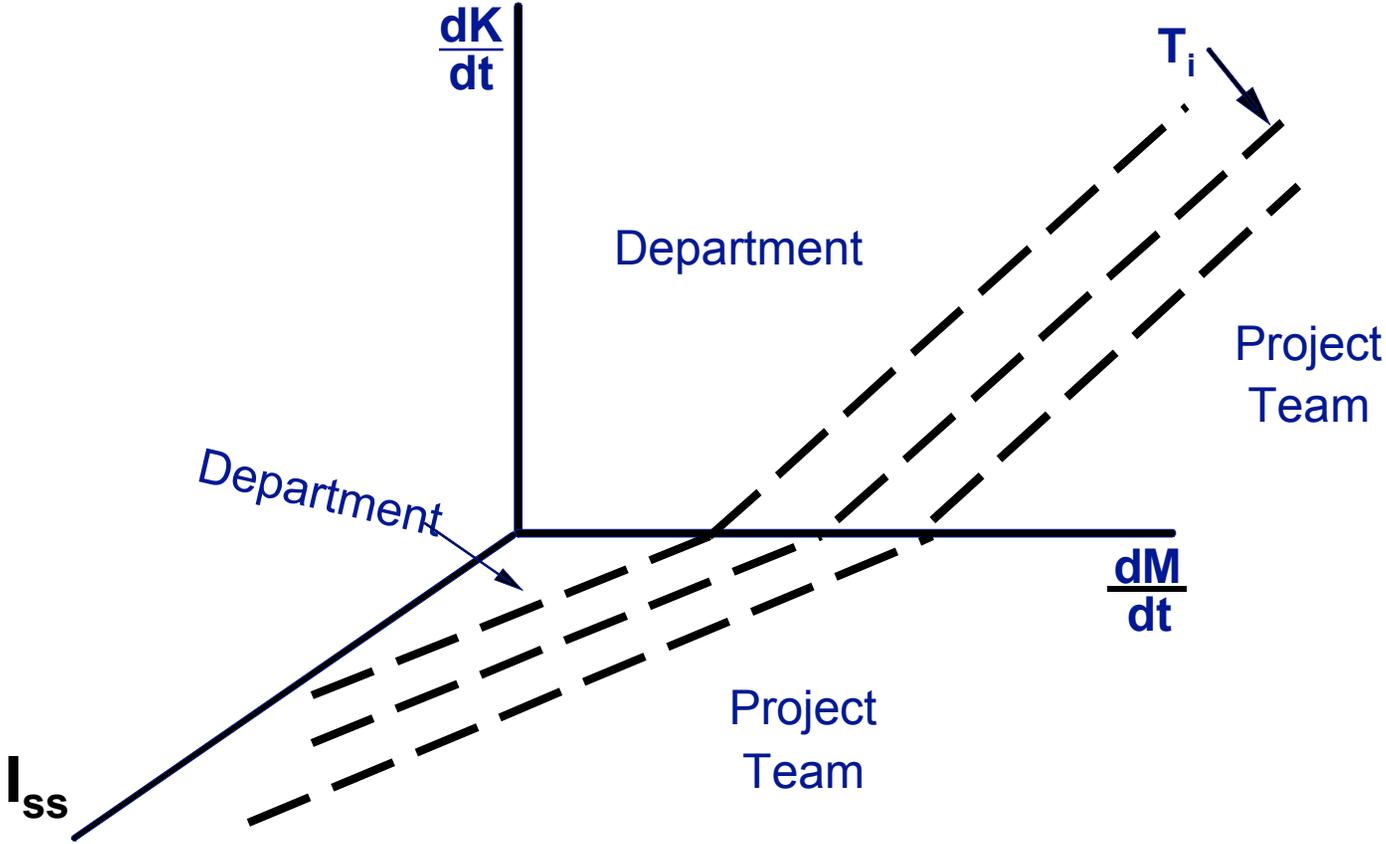
Organizational Structure Space III



Organizational Structure Space IV



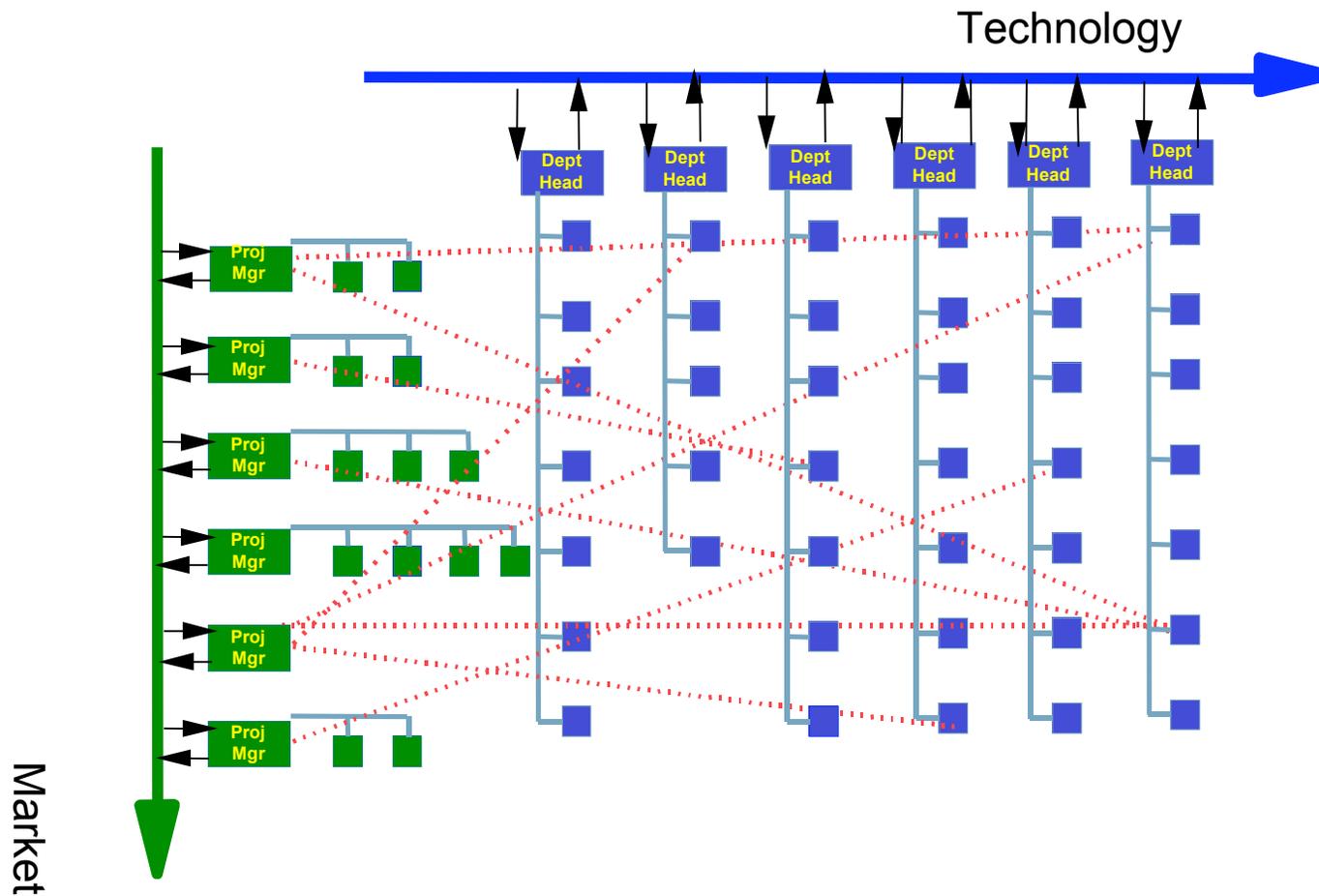
Organizational Structure Space V



Structuring the Organization

- **Standard Industrial Practice**
 - Ignores the rate at which technologies are developing (despite the fact that this can often be measured).
 - Usually ignores the interdependencies in project work (seasoned project managers are an exception).
 - Focuses on project duration (and usually makes the wrong decision on this parameter).

Matrix Connections to Market and Technology



References

Allen, Thomas J., 1984. *Managing the Flow of Technology: Technology Transfer and the Dissemination of Technological Information within the R and D Organization*, MIT Press, Cambridge, MA.

Allen, T.J. (1986) Organizational structure, information technology and R&D productivity, *IEEE Transactions on Engineering Management* 33, (4).