

Management of Technology

B02-3. Technological Innovation Process



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02. Technological Innovation Process

- General Features of Technological Innovation Process
 - Cumulative process
 - Technologies are results of cumulative learning of knowledge.
 - Continuous/discontinuous process
 - Technologies are processed by sustaining/disruptive innovation.
 - Non-equilibrium process
 - Technologies are affected by continuous imbalance.



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02. Technological Innovation Process

- General Features of Technological Innovation Process
 - Path-dependent process
 - Technologies are affected by trajectory of technology development.
 - Interdependent process
 - Technologies are mutually affected.
 - Social process
 - Technologies are affected by other non-technological factors.
 - Institutional process
 - There are various institutions and regulation for technologies.



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02. Technological Innovation Process

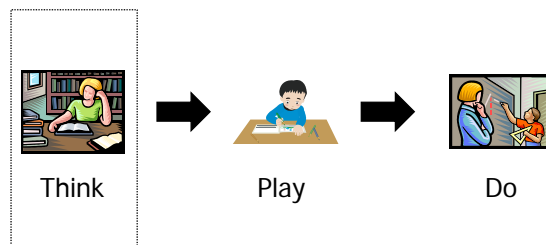
- Two Perspectives of Technological Innovation Process
 - Traditional perspective
 - Technologies are developed linearly.
 - Technologies are evolved by technological superiority.
 - Social perspective
 - Technologies are developed non-linearly.
 - Technologies are analyzed socially. → analytical flexibility
 - Innovation is the fruit of complex systems of technology-society.



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02. Technological Innovation Process

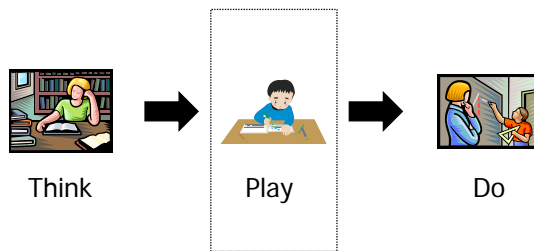
- New Innovation Process in Digital Economy (Think-Play-Do)
 - Think
 - Activities associated with **the creation of new ideas and options**, including creating, conceiving, imaging, observing, combing, delivering, interpreting, searching, defining, imitating, reflecting, intuition, and experimenting



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02. Technological Innovation Process

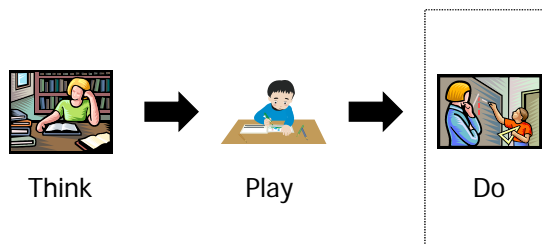
- New Innovation Process in Digital Economy (Think-Play-Do)
 - Play
 - Activities associated with **the selection of new ideas** to ensure they are practical, economical, targeted, and marketable, including verifying, simulating, extrapolating, interpolating, preparing, testing, prototyping, validating, transforming, integrating, exploring, and prioritizing



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02. Technological Innovation Process

- New Innovation Process in Digital Economy (Think-Play-Do)
 - Do
 - Activities associated with **the realizing and operationalizing of new ideas**, including producing, exploiting, compiling, executing, assembling, implementing, customizing, diffusing, and completing



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03. Innovator's Solution



- Establishment of Destructive Innovation Strategy
 - Product
 - Do not focus on a better product than that of competitors!
 - But focus on a potential product even with worse functions!
 - Customer
 - Do not focus on only customers with high-profit!
 - But focus on potential customers even with low consumption!
 - Marketing
 - Do not focus on only demographic analysis!
 - But focus on problems and environments of customers!
 - Business Domain & Profitability
 - Do not focus on only old CSF!
 - But focus on sources of value-creation in the future!
 - Sustainability
 - Avoid commoditization!
 - Make continuous profits from a necessary domain of value chain!

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03. Innovator's Solution



- Practice of Destructive Innovation Strategy
 - Management
 - Appropriate experience is needed rather than excellence!
 - Structure
 - Do not depend on external supports!
 - Instead, use internal destructive innovations!
 - Decision Making
 - Focus on discovery with dealing with crises!
 - Setting Expectations
 - Do not endure a certain level of loss!
 - A best method for growth is to make profits.
 - Leadership
 - Do not be obsessed with old success!
 - Consider new environments!

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