



Five Forces Driving Game Technology Adoption

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Game Technology Entry

Tactical Iraqi



IEWTPT Tactical Questioning



AMBUSH!



Americas Army



Full Spectrum Warrior



Disruptive Innovation Model

(Christensen, 1992 & 1997)

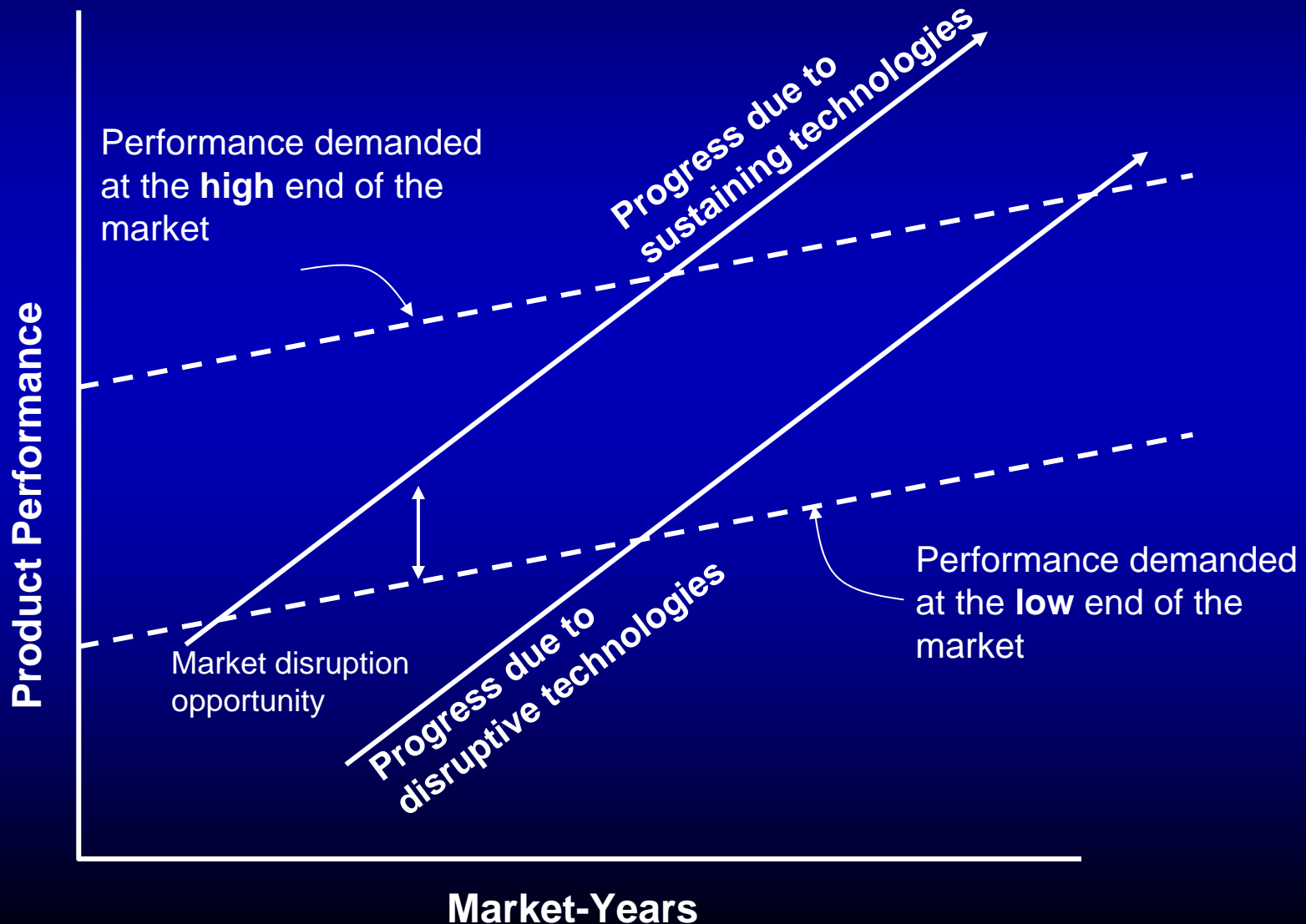


Figure 2

Simulation Industry Disruption

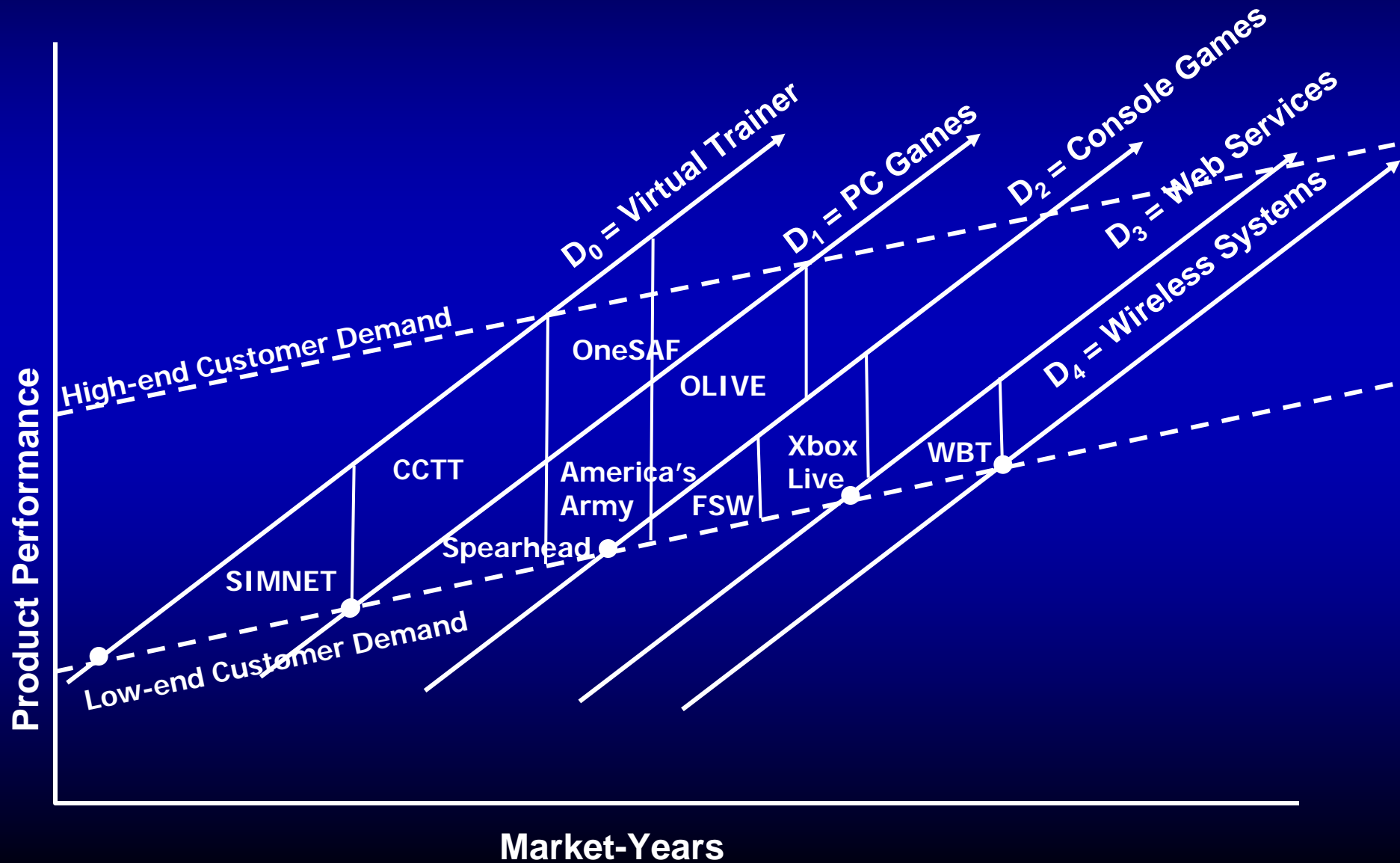
(Smith, 2005 & 2006)



Figure 3

Multiple Waves of Disruption

(Smith, 2005 & 2006)



Five Forces of Game Technology Adoption

Industry Success

- Success of the technology in other industries
 - e.g. Military Training, Chemistry Experiments, Corporate Training, Architecture Design



Adoption Pattern

- Niche Area
- Unregulated Spaces
- Certified Applications
- Recommended Practice
- Mandatory Standard

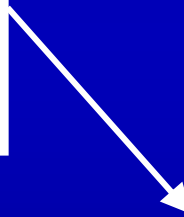


Social Acceptance

- Growing social acceptance of game-rooted solutions for other industries
 - Driven by Maturing Gamers, Social Prevalence, Media Image

Hardware Costs

- Significant reduction in computer hardware costs required to support game-based applications
- e.g. 10X Reduction for PCs
- 100X for Consoles



Software Power

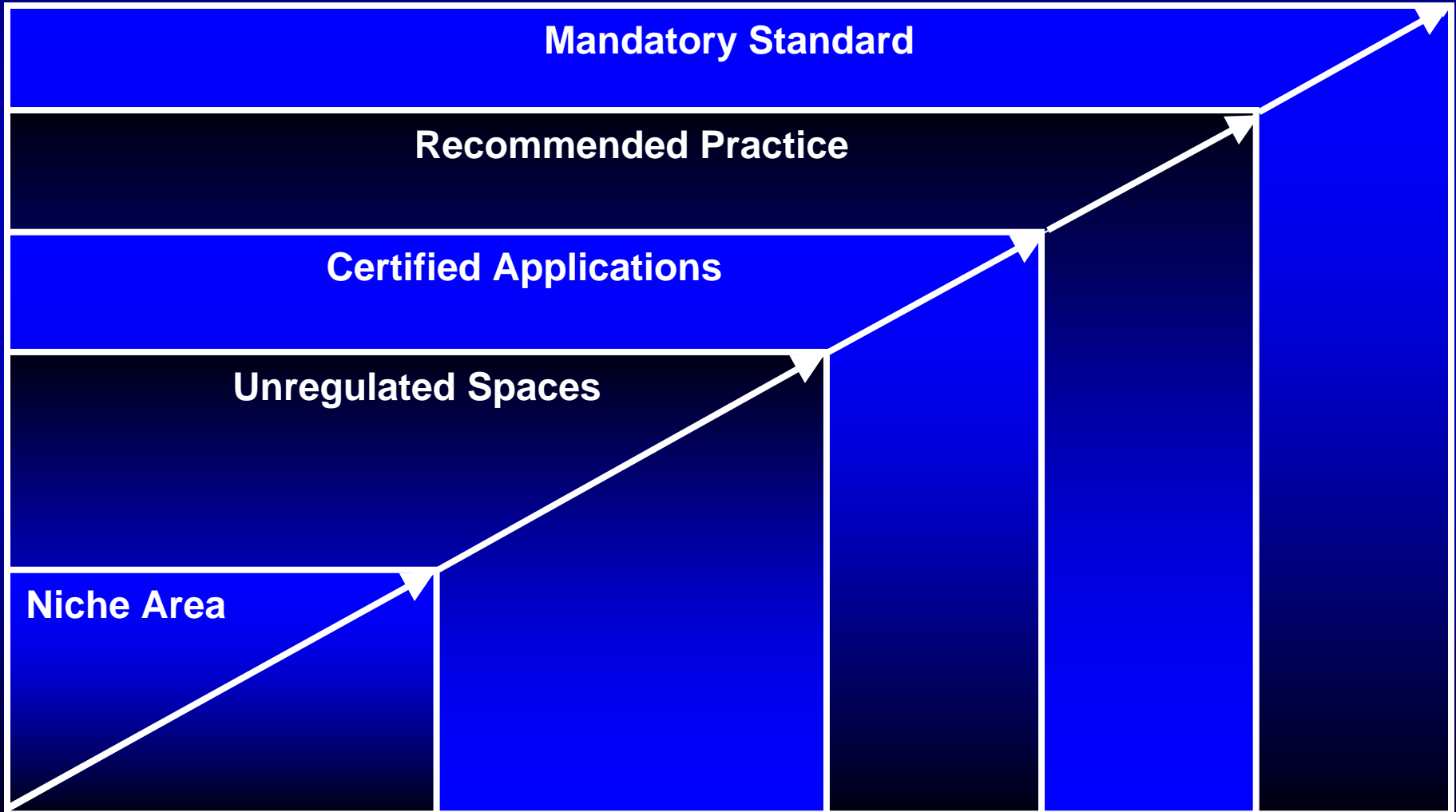
- Significant power of game-based software applications
- e.g. Intelligent Agents, 3D Worlds, Accessible GUI, Physics Models, Global Network, Persistent Worlds

Experimentation

- In-industry experimentation with the technology identifies areas for useful application

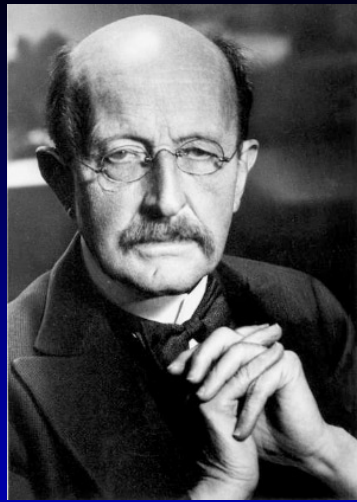


Stages of Adoption



Conclusion

- **The financial and technical advantages of technologies originating in the game industry are undeniable and will continue to grow**
- **Industrial need for better training tools will drive further adoption of these technologies**
 - **Specific industry acceptance levels may require separation or usurpation of the ideas (e.g. medical)**
- **The five forces are observed and actual**
- **The adoption pattern from “Niche Area” to “Mandatory Standard” is speculative**
- **Never underestimate the immovability of established bureaucracies and “old experts”**



"a new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it."

Max Planck

Founder of Quantum Theory
Nobel Prize in Physics, 1918