Chesbrough (2003) The Era of open innovation

There is a change from closed (internal) innovation to open innovation (R&D cooperations).

Model of closed innovation:
Main argument: Successful innovation requires control
Process: companies generate their own ideas that they would then develop, manufacture, market, distribute and service themselves
Consequences: Companies need to invest in internal R&D facilities, researchers and resources needed for R&D projects
Problems: rise & mobility of knowledge workers, difficult for companies to control proprietary ideas & expertise, growing availability of venture capital, more complex & specialised R&D projects

Model of open innovation:
Main argument: It is often cheaper and better to ‘buy’ R&D outcomes than to develop them internally.
Process: Firms can commercialise external ideas by deploying outside pathways to the market, commercialize internal ideas through channels outside of their current businesses to generate value.
Arguments:
   No longer should a company lock up its Intellectual Property, but instead it should find ways to profit from others' use of that technology through licensing agreements, joint ventures & other arrangements.
   A company that is focused too internally is prone to miss a number of opportunities because many will fall outside the organization's current businesses or will need to be combined with external technologies to unlock their potential.

Contrasting Principles of Closed and Open Innovation

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<th>Closed Innovation Principles</th>
<th>Open Innovation Principles</th>
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<td>The smart people in our field work for us.</td>
<td>Not all of the smart people work for us* so we must find and tap into the knowledge and expertise of bright individuals outside our company.</td>
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<td>To profit from R&amp;D, we must discover, develop and ship it ourselves.</td>
<td>External R&amp;D can create significant value; internal R&amp;D is needed to claim some portion of that value.</td>
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<td>If we discover it ourselves, we will get it to market first.</td>
<td>We don’t have to originate the research in order to profit from it.</td>
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<td>If we are the first to commercialize an innovation, we will win.</td>
<td>Building a better business model is better than getting to market first.</td>
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<td>If we create the most and best ideas in the industry, we will win.</td>
<td>If we make the best use of internal and external ideas, we will win.</td>
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<td>We should control our intellectual property (IP) so that our competitors don’t profit from our ideas.</td>
<td>We should profit from others’ use of our IP, and we should buy others’ IP whenever it advances our own business model.</td>
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How prevalent is open innovation?
Many industries are currently transitioning from closed to open innovation. They have been defining new strategies for exploiting the principles of open innovation, exploring ways in which external technologies can fill gaps in their current businesses and looking at how their internal technologies can spawn the seeds of new businesses outside the current organization. In doing so, many firms have focused their activities into one of three primary areas: funding, generating or commercializing innovation.

Funding Innovation:
Venture capital helps move ideas out of corporations and universities and into the market, typically through the creation of start-ups.

Innovation benefactors provide new sources of research funding with focus on the early stages of research discovery.

Generating Innovation:
Four types of organizations that primarily generate innovation:
1. Innovation explorers (performing the discovery research function that previously took place primarily within corporate R&D laboratories. Explorers tend to innovate for innovation's sake.)
2. Merchants (their activities are focused on a narrow set of technologies that are then codified into intellectual property and aggressively sold to others. Innovation merchants will innovate but only with specific commercial goals in mind)
3. Architects (provide a service in complicated technology worlds; they develop architectures that partition this complexity, enabling numerous other companies to provide pieces of the system)
4. Missionaries (mostly community-based nonprofits & religious groups; create & advance technologies to serve a cause but do not seek financial profits from their work, want to mission e.g. Linux)

Commercialising Innovation:
Two types of organization:
1. Innovation marketers (often perform at least some of the functions of the other types of organization, but their defining attribute is their ability to profitably market ideas, their own as well as others'. Marketers focus on developing a deep understanding of current & potential needs in the market.
2. One-stop centers (provide comprehensive products and services. They take the best & deliver those offerings to their customers at competitive prices e.g Yahoo)

Conclusion:
Companies must balance the creation of value with the need to capture a portion of that value.
A centralized approach to R&D has become obsolete which gives opportunities to small organisations in developing & marketing innovation which speeds up the process of innovation. Good networks are necessary in this new system.