

Innovation

New business roadmap

Developing new business based on customer needs to achieve early commercialization

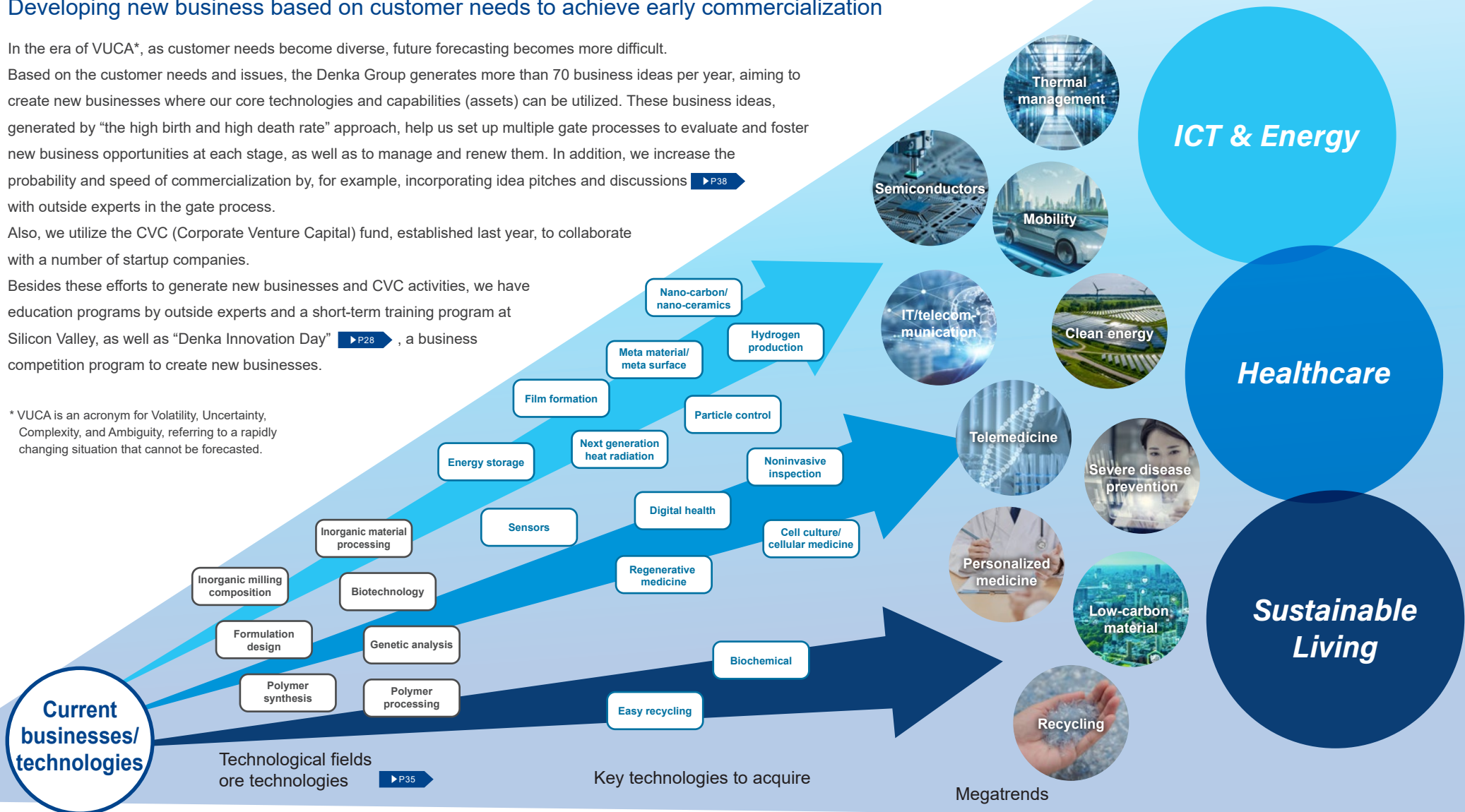
In the era of VUCA*, as customer needs become diverse, future forecasting becomes more difficult.

Based on the customer needs and issues, the Denka Group generates more than 70 business ideas per year, aiming to create new businesses where our core technologies and capabilities (assets) can be utilized. These business ideas, generated by “the high birth and high death rate” approach, help us set up multiple gate processes to evaluate and foster new business opportunities at each stage, as well as to manage and renew them. In addition, we increase the probability and speed of commercialization by, for example, incorporating idea pitches and discussions [▶ P38](#) with outside experts in the gate process.

Also, we utilize the CVC (Corporate Venture Capital) fund, established last year, to collaborate with a number of startup companies.

Besides these efforts to generate new businesses and CVC activities, we have education programs by outside experts and a short-term training program at Silicon Valley, as well as “Denka Innovation Day” [▶ P28](#), a business competition program to create new businesses.

* VUCA is an acronym for Volatility, Uncertainty, Complexity, and Ambiguity, referring to a rapidly changing situation that cannot be forecasted.





Initiatives for New Business Creation

MESSAGE

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Advancement of organizations and systems for new business development

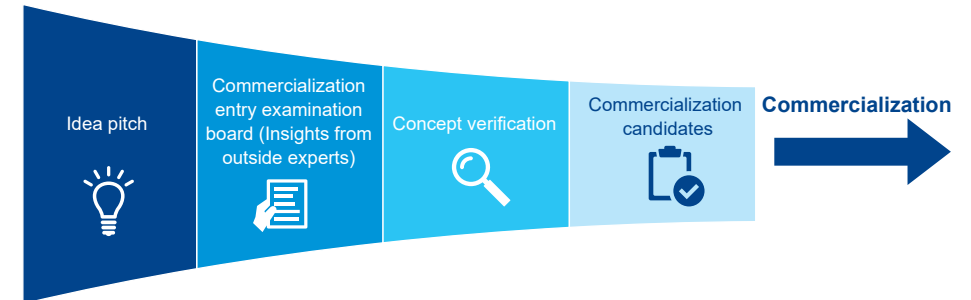
Denka has conceptualized and validated multiple commercialization themes to create new values with business structure conversion in mind. For early achievement of our management plan, Mission 2030, we are working to advance our organization and structure for new business development.

The purpose of new business development is: Create new growth drivers to achieve enhanced business performance that exceeds the market growth, while refining the new business focus areas and growth scenarios based on the judgment criteria for the market size, growth potential, social issue resolution, etc., and supporting shrinking exiting businesses. To achieve this goal, we should have our future vision based on the given social issues and develop our strategies with a back-casting approach. To refine the most difficult question "what to focus and concentrate on," we must thoroughly focus on marketing. In a rapidly changing world market, Denka communicates with customers directly, listens to the market from the early stage of conceptualization for commercialization, and foresee the potential social change and future needs. Then, we thoroughly enhance our hypothesis verification cycle based on marketing, as well as refine our systems to utilize our management resources in an effective manner by, for example, early pull out projects with low growth potentials. As a part of our commercialization strategy, we would not limit our activities in product development and startup investment, but also promote business commercialization through a new business model creation that utilizes all available means, including alliance with business partners.

The key for successful new business development is the presence of global management human resources with robust and resilient leadership that can organize and lead teams across countries and entities. Denka will help enthusiastic personnel have a variety of experiences, fostering them to be management resources with leadership and international senses.

Tsuneichi Fujiyama, the founder of Denka, was a man of action equipped with unique ideas. He launched a whale-catching electric spear business soon after graduating from the Department of Electrical Engineering at the University of Tokyo in 1898. While failing in his first business, Fujiyama came to know lime carbide manufacturing method - the cutting-edge technology at the time - through a German magazine in 1902. He handmade transformers and electric furnaces, and overcame a series of failures. He continued his challenges, even after he lost in a fire the roof of a warehouse at a hydraulic power plant as substitute for laboratory where he worked for his invention. He became the first engineer to manufacture carbide in Japan, and his technology served as the foundation for Denka's fertile business to contribute to resolve a social issue at the time, what was the need to increase food production in Japan due to rapid population growth. Denka will go back to the founder's venture spirit, and challenge creation of new value, beyond product development to provide solutions to realize our customers' highly added values, including social issue resolution and production improvement, in the growth area where the Denka Group can utilize its strength, regardless of the presence of synergy effects.

1 Commercialization candidate selection process



2 Idea pitch

As the initial gate process to examine business ideas, we have an idea pitch event every month. The idea pitch event is designed to examine the audience's empathy and acknowledgment, with a discussion time between the presenter and the audience on the challenges seen in the presented ideas and solution ideas. Its primary purpose is to communicate ideas at an early stage. Through such discussions, the participants can grasp the target customers and obtain new ideas for solutions.



3 Commercialization entry examination board (Insights from outside experts)

Commercialization ideas screened at the idea pitch undergo hypothesis verification from both perspectives of potential clients and technology. Candidates verified as FACT^{*1} move to the next gate process, "Commercialization entry examination board." At the commercialization entry examination board, not only the in-house experts but outside experts also have thorough discussions at the early phase on the verification results, marketability, feasibility of the commercialization candidate from a wider viewpoint, and examine them if they are eligible to move to the next stage: Concept verification^{*2}.



^{*1} Verification that customer needs exist, and that the idea is feasible with Denka's core technologies and capability.

^{*2} A prototype is built to verify if the idea/concept in question is feasible.