



Bridgestone Innovation Park
From interaction with empathy to co-creation

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BRIDGESTONE
Solutions for your journey

Hello, everyone, I am Masato Banno, Global CTO of Bridgestone Corporation.
Thank you for attending today's event.



Today, on April 21st, 2022 ,
this "Bridgestone Innovation Park", where we will create new value with
various stakeholders, starts full-scale operation.



Toward 2050, Bridgestone is evolving into a sustainable solutions company.
Born of our enduring Bridgestone values, this is our personal E8 Commitment
to support the realization of a sustainable society.

Energy Committed to the realization of a carbon neutral mobility society.

Ecology Committed to advancing sustainable tire technologies and solutions
that preserve the environment for future generations.

Efficiency Committed to maximizing productivity through the advancement of mobility.

Extension Committed to nonstop mobility and innovation that keeps people and the world moving ahead.

Economy Committed to maximizing the economic value of mobility and business operations.

Emotion Committed to inspiring excitement and spreading joy to the world of mobility.

Ease Committed to bringing comfort and peace of mind to mobility life.

Empowerment Committed to contributing to a society that ensures accessibility and dignity for all.

Bridgestone E8 Commitment to Our Future

For the sake of the Earth, which future generations of children have entrusted in our care.
Together with you.

The corporate commitment "Bridgestone E8 Commitment" announced on March 1st in 2022, on the occasion of 91st anniversary since its founding will be the axis of activities which will be done in the innovation park.

First of all, please see the movie of "Bridgestone E8 Commitment" which we made with all our hearts.

Movie URL: [Bridgestone E8 Commitment | Bridgestone](#) -----

Bridgestone will realize a sustainable society through the E8 Commitment, starting from interaction with empathy and then to co-create value with many stakeholders, such as the Group's teammate (employees), society, its partners and customers.

And "Bridgestone Innovation Park" has been established as a site to co-create new values, starting from empathy.

Bridgestone 1.0 ~ Bridgestone 2.0

Bridgestone 3.0 ~



Contribution to motorization in Japan

The newest model plant in 60's, with the newest plant layout
Produce the best products with collaboration of plant and
tech center facing each other

Creation of a community with regional society and Bridgestone

Built Employee apartments, hospitals, wellness facilities,
donated elementary school

Contribution to the region's environment and teammate's health

Plant greenscapes around facilities and managed exhaust and
other emissions as well as noise and dust

Bridgestone Innovation Park

Vision of Kodaira-Tokyo Renovation

**Creating future value from Kodaira,
the birthplace of Bridgestone's technology**

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In 1962, Kodaira-Tokyo technical center, as a predecessor of the innovation park, was built in the same site of Tokyo plant which was established in 1960.

Until today, Bridgestone has been supporting the motorization in Japan with high quality products which were developed by the collaboration with the plant and technical center facing each other in the same site.

Also the Group has contributed the development of regional community in Kodaira- Tokyo, and evolved together.

In 2020, Bridgestone strived into Bridgestone 3.0, the third foundation. At the timing to accelerate the transformation toward a sustainable solutions company, together with "Bridgestone E8 Commitment", the Group renovated the technical center as a site to create future value from Kodaira, the birthplace of Bridgestone's technology.



Today, this site in Kodaira takes a new step as “Bridgestone Innovation Park”.

It is consisted of mainly three facilities such as “Bridgestone Innovation Gallery” opened in 2020, “B-Innovation” and “B-Mobility” which start full operation today.

“Bridgestone Innovation Gallery” where introduces the Group’s journey until now, DNA, business initiatives and activities for future, to begin from interacting with empathy toward co-creation, connecting between Bridgestone and partners.



“B-Innovation”, as a place to lead from “interaction with empathy” to “co-creation”, will realize;

- 1) “Co-ideation” with potential partners by seeing our core technologies and products, and exchanging ideas about concept of technology and business model etc. and crystallize them.
- 2) “Co-R&D” which converts ideas to technologies & business models by research and develop together at the facility combined digital.
- 3) “Co-creation” which realize new value with various partners and “B-Innovation” will be the site to create new businesses.



"B-Mobility" located at next to "B-Innovation" is the proving ground where we can promptly experience and review prototypes of technologies and products developed with partners by using real cars.

"B-Innovation" and "B-Mobility" will realize agile development by repeating the process "develop and test the generating ideas immediately".

Based on them, we aim to maximize innovative value through co-creation with various stakeholders.

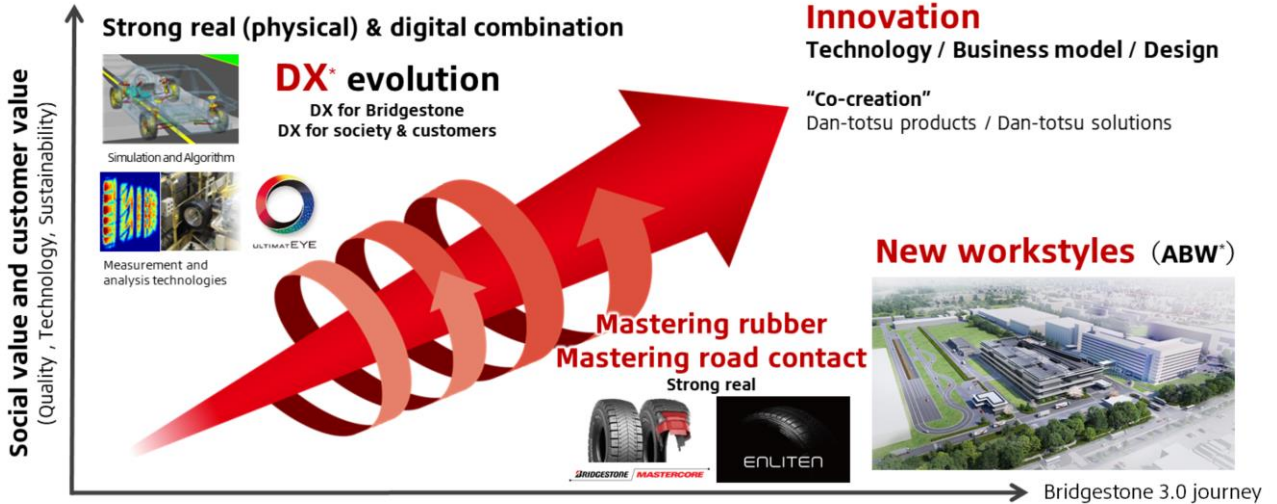
Innovation generated in Bridgestone Innovation Park

Next, I will explain about how Bridgestone defines its innovation.

How Bridgestone accelerates innovation

*ABW = Activity Based Working

*DX= Digital Transformation



Accelerate innovation through co-creation with strong real & digital and new workstyles

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This illustration shows the concept about Bridgestone group's innovation. Bridgestone's innovation will be accelerated based on three axes, consisted of technology, business model and design.

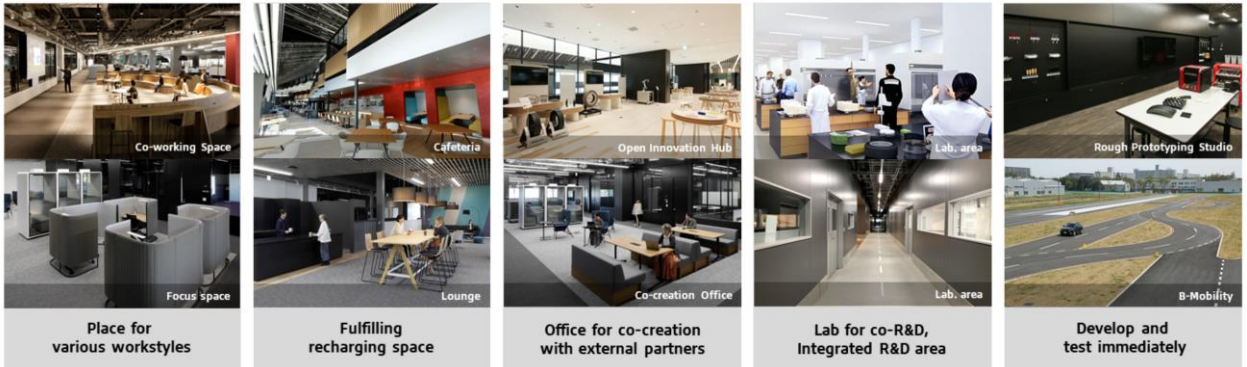
As an important factor for innovation, the Group will evolve DX by combining the "strong real", in another word, core competencies, such as "Mastering rubber" and "Mastering road contact" that have been cultivated in 91 years' history since its founding, with "digital" simulation technology etc..

In addition, it will develop new workstyles and drive culture transformation to promote innovation.

New workstyles to generate innovation (Activity Based Working)

Transform culture that realizes both “each employee’s growth and happiness” and “growth of Bridgestone”

With partners, employees design various workstyles as they wish at anytime, in anywhere, with anybody



Drive innovation by integrated transformation of both work places and workstyles

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This “Bridgestone Innovation Park” will take the role to drive the integrated transformation of both work places and workstyles including enhancing engagement.

The Group aim to maximize each employee’s performance through the ideas of ABW (Activity Based Working), which each employee is able to design various workstyles as they wish and choose the most suitable workspace for them.

In addition, it will drive culture transformation to realize both “each employee’s growth and happiness” and “growth of Bridgestone”, valuing each employee who takes initiatives in work activities.

Co-creation with Bridgestone's global innovation sites



Digital Garage

Technical Center (Rome, Italy)

Core of technology innovation

Bridgestone Innovation Park

Technical Center (Kodaira, Tokyo, Japan)



Mobility Lab

Technical Center (Akron, OH, U.S.)

Drive Co-creation between innovation sites in each region,
from Bridgestone Innovation Park as a global hub

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As the innovation park is at the core, Bridgestone will reinforce co-creation among Digital Garage in Roma, Italy and Mobility Lab in Akron, Ohio, U.S..

The Group will accelerate the innovation within Bridgestone group global by leveraging strengths at each site.

From interaction with empathy to co-creation

From here, I will introduce the initiatives based on the concept of innovation which I explained earlier.

Framework of co-creation based on Bridgestone E8 Commitment



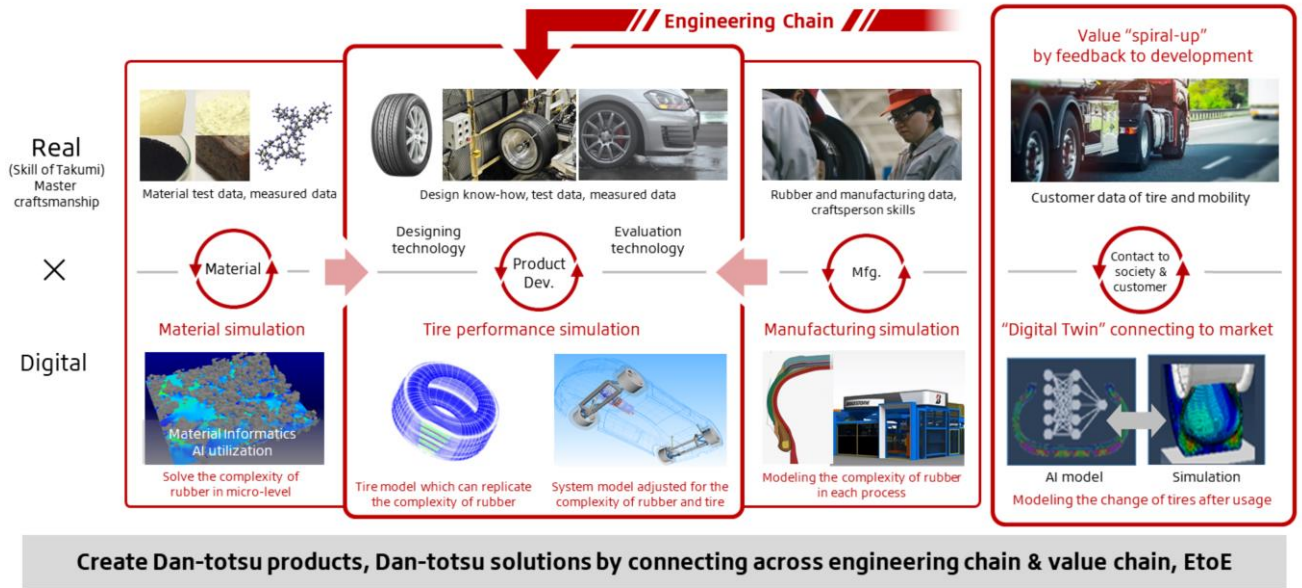
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What I will explain today are four co-creation initiatives generated from interaction with empathy;

- "co-creation" mobilizing Bridgestone's core competencies,
- "co-creation" with new teammates joined from M&As
- "co-creation" carrying the dreams of humankind and challenging unknown environment,
- "co-creation" with external partners in exploratory business.

"Co-creation" mobilizing Bridgestone's core competencies



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First is "co-creation" mobilizing Bridgestone's core competencies.

The Group will evolve its core competencies such as;

- "Mastering rubber" technology is to see, analyze and manage rubber which is a difficult material to handle,
- "Mastering road contact" which have been developed through various experience on the road around the worlds, knowing various conditions of customer use.

by combining with digital simulation technologies in material development, tire performance, and manufacturing process.

Bridgestone will expand and develop Dan-totsu products, Dan-totsu solutions through co-creation across engineering chain and value chain EtoE, combining deep knowledge, know-how (expertise) and technology.

“Co-creation” mobilizing Bridgestone’s core competencies
- Tire business - : ENLITEN business strategy

“ENLITEN” : innovative tire technology optimal for EV fitment

Evolve into “business strategy” with technology, product and business model :
ENLITEN business strategy “a new premium for EV era”



The graphic features a black background with a tire on the left. The text 'ENLITEN BUSINESS STRATEGY' is written in white. To the right, three white text blocks are stacked vertically:

- Sustainability vs. business growth
- Customization of tire performance vs. productivity improvement & cost optimization across value chain
- Simultaneously create value that can sometimes be contradictory

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Bridgestone will establish ENLITEN business strategy which will be a new premium for EV era by mobilizing its core competencies such as “Mastering rubber” “Mastering road contact”.

The Group has expanded ENLITEN as the innovative tire technology optimized for EV fitting.

From now on, we will expand its value to technology, product and business model and evolve as a business strategy.

We will aim to simultaneously create values that can sometimes be contradictory, such as sustainability and business growth, customization of tire performance and productivity improvement, cost optimization across value chain.

ENLITEN business strategy will be the core of Bridgestone’s tire business in its transformation based on “Bridgestone E8 Commitment”.

"Co-creation" with new teammates in Bridgestone : Global expansion of solutions business



Digital fleet solutions provider
(Acquired in 2019, @Europe)



Digital fleet solutions provider
(Acquired in 2021, @U.S.)



Digital Garage



Bridgestone
Innovation Park



Mobility Lab

Mining solutions
(iTrack solutions business,
acquired from Transense
Technology in 2021,
@Australia)



Mining vehicle tire solutions provider
(Acquired in 2021, @Australia)

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Next is "co-creation" with new teammates joined Bridgestone from M&As.

The Group has expanded its solutions business by welcoming new teammates through M&A such as Webfleet solutions and Azuga of mobility solution providers, and Otraco of mining solutions provider, and deepened collaborations with them.

Bridgestone will further expand its unique solutions business, understanding customer's pain points and solving them, through co-creation with new teammate, in aligned way with 8 values in Bridgestone E8 Commitment.

Also it will reinforce co-creation with tire and solutions business, which amplify value as the spiral up, by feeding back mobility data to engineering chain of tire development.

"Co-creation" carrying the dreams of humankind : A moon exploration project with "team Japan**"

Extension

** team Japan : mainly consisted of the Japan Aerospace Exploration Agency (JAXA) and Toyota Motor Corporation (Toyota)

Carry the dreams of humankind on the harsh lunar surface as a member of "team Japan**"

- tires evolve with every new dream -

- Go Farther. Go Anywhere -



Rover for mobility on the lunar surface "Lunar cruiser"
(co-development by JAXA and Toyota in 2019 - 2021)



An unprecedented air-free tire with steel wool

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Toward space beyond the earth,
Bridgestone promotes "co-creation" carrying the dreams of humankind.

Bridgestone participates in a moon exploration mission as a member of "team Japan" and has developed tires for "Lunar cruiser" which will be utilized by a moon exploration.

In a harsh environment where neither air nor rubber can be used,
we will support the dreams of humankind
from the ground by air-free tire with steel wool made by 100% metal.

Bridgestone's passion to this co-creation is
represented Extension in "Bridgestone E8 Commitment",
Committed to nonstop mobility and innovation that keeps people and the
world moving ahead.

Tires have always evolved along with mobility,
supporting the movement of people.
With every new dream, tires will continue evolving.

“Co-creation” in exploratory business

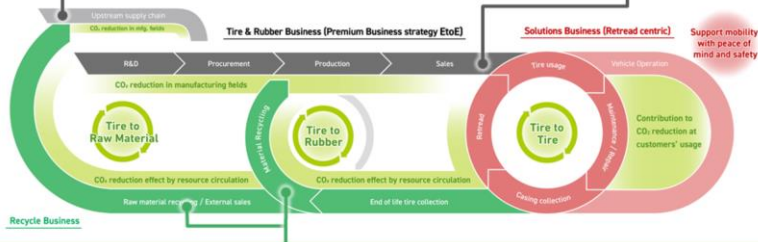
Guayule business “Plant to Produce Rubber” in arid zones Explore toward commercialization

- Aim to commercialize in mainly U.S. in 2026 through co-creation with partners



Soft-robotics business Explore Business model

- Leverage Bridgestone's core competencies “Mastery of rubber” and “Mastery of road contact”
- Continue to explore co-creation partners and aim for building business model



Recycle business

Tire to Rubber & Tire to Raw Material Explore technology

From tire to oil and chemical products

- Aim to build recycle business with ensuring high-quality
- Co-create with partners and promote ecosystem building to build business model globally while leveraging each region's characteristics and strength



Finally, I will explain about “co-creation” in exploratory business.

Toward the realization of value circulation across value chain, “produce and sell”, “provide value at use”, and “renew” tires to raw material, Bridgestone will explore technology, business model to build eco-system through co-creation with partners.

"Co-creation" in exploratory business : Soft-robotics business

Empowerment

Social / customer issues

- Declining birthrate & aging population
- Needs for contactless (COVID-19 impact)
- Work automation



"Support mobility & movement of people and objects with safety & peace of mind"

Pick things up "in the right way" - Soft-robotics business
- Support the lives of all individuals through the power of rubber -



Leverage in "Mastering rubber" "Mastering road contact"
Core technology : Rubber actuator (rubber artificial muscle)

Aim to establish business model based on co-creation

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Responding to social and customer challenges such as needs for contactless and automation, soft-robotics business as one of exploratory business will tackle them to support mobility and movement of people and objects with safety and peace of mind by leveraging Bridgestone's core competencies.

Soft-robotics can pick things of various sizes from soft to hard up "in the right way" with rubber actuator, artificial muscle made by rubber, which is developed as the Group's core technology.

It will support the lives of all individuals through the power of rubber in alignment with Empowerment in the E8 Commitment.

The Group aims to establish business model based on co-creation.

"Co-creation" in exploratory business : Recycle business

Energy

Ecology

- Toward the realization of **material circularity**, drive the commercialization of recycle which "renew" used tire to raw material with co-creation partners globally



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Bridgestone will promote recycle business which aims to "renew" used tire to raw material by exploring technology based on co-creation globally, and will establish business model to realize carbon neutrality and circular economy which are represented in Energy, Ecology of the E8 commitment.

In Japan, the Group has started co-creation with ENEOS. The Group has been interacting with empathy based on the visions of both companies, and will conduct large-scale experiment till 2030 and aims for early commercialization toward "the social implementation of chemical recycling technologies for used tires" by combining core competencies and strengths at ENEOS and Bridgestone.

In U.S., the Group has started co-creation with LanzaTech which has unique technology converting carbon dioxide to the energies and chemicals in order to prevail sustainable resource. It will challenge to "renew used tires to raw material such as PET, polyester yarn." In addition, they will explore opportunities of co-development to renew used tire to raw material of new tire by a sustainable way.

Bridgestone's Recycle business



Used tire = "resource"

"Renew" tires to raw material

Create a society where tire value "circulates"

Preserving the environment for future generations through the recycling of tires

Together with you

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In order to realize further co-creation, Bridgestone launches "EVERTIRE INITIATIVE" in its recycle business.

End of life tires are resources.

We aim to change the concept of "end-of life", and renew them as a "circulation" to realize a society where tire value continues to circulate.

"EVERTIRE" is named after this concept of continuous circulation.

This initiative cannot be achieved on our own.

Bridgestone hopes to gain empathy from various stakeholders and invites them to co-create value together.

Bridgestone, as a leading company in tire and rubber business, will lead initiatives for recycling and advance sustainable tire technologies that preserve the environment or future generations.

We will like to advance together with our stakeholders.



**Bridgestone
E8 Commitment
to Our Future**

To close this presentation, as mentioned in the beginning, “Bridgestone E8 Commitment” will serve as the axis to drive management while earning the trust of future generations, and Bridgestone Group will commit to realize a sustainable society.

The Group would like to start from interacting with empathy from various stakeholders and evolve to create new value together.

“Bridgestone Innovation Park” in Kodaira-Tokyo will be developed as a site connecting many stakeholders such as society, its partners, and customers with Bridgestone, and to accelerate innovation from interaction with empathy to co-creation.

I would like to welcome various partners to “Bridgestone Innovation Park”.

Thank you for your attention.



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