

What if you
could be
always optimal?



How Financial Services organizations can achieve a decisive edge in challenging times

The future is uncertain. That much we know. What really matters in Financial Services is being better at predicting the future, preparing for it, being better placed to profit from it, and, of course, mitigating its risks. There are no magical crystal balls, but we do have digital technology to help us be always optimal. You can gain a critical edge in a rapidly changing and challenging environment if you can process more combinations of possible outcomes and futures faster than your competitors.

To do that you need to ask more complex questions and leverage the power of combinatorial optimization to gain faster insights and make better decisions. It is the key to staying financially (and operationally) sound and profitable. There are more possible futures than any human brain can cope with.

Delivering that lightning fast computing power is the simple idea behind Fujitsu Quantum-Inspired Optimization Services (QIOS). You are able to seize new business advantages while always running your operations at their optimal level.

And classical computing can't cope with them either. Which means, for most financial services enterprises, there are a huge number of possible futures that can't be analyzed using the tools currently available. If they try, it takes too long.

What you need is processing superpower so you can find the optimal solution from that huge number of complex variables and quintillions of options and do it in seconds. Then keep doing it so you can re-optimize your results as often as you need or want to. The ability to deliver combinatorial optimization at speed enables you to act more decisively.

Combinatorial optimization is recognized as a key function by 57% of enterprises according to Forrester research conducted

for Fujitsu¹. And, the same research showed that the leaders of those enterprises see Quantum-Inspired Computing to the key to achieving an always optimal approach to leveraging the power of their data.



Your data is the key to decisive optimization

Any financial services enterprise runs on data. Historical data, current data, and projected data. That's always been true, but in a hyperconnected, global economy that runs milli-second to milli-second, achieving a data-edge can mean the difference between profit and loss and missed growth targets.

QIOS adds an extra dimension to how you can consistently (and quickly) pinpoint the best solution(s) from a massively complex set of possibilities hidden within very large amounts of data. Then repeat the process as often as you need to. The power to do that reliably has not been possible until now. That means you get a richer understanding of what's

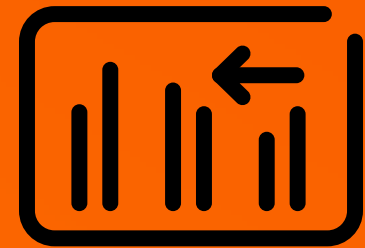
happened, what's happening today, and what could happen tomorrow.

Fujitsu QIOS gives you the calculating power to optimize complex models, processes, and services across an enormous range of use-cases.

This allows you to create business solutions which run faster, use less energy and space, and, crucially, cost less.



Four ways QIOS could make a big difference in Financial Services



Asset-backed securities are part of banks' daily business and are a good liquidity management tool for companies. Compiling several thousand assets taking into account various criteria is a difficult task, combinatorially, and requires a lot of computing time. Conventional hardware often does not provide the optimal solution. QIOS optimizes the selection process of several thousand individual receivables to a securitization portfolio and as a result increases the liquidity.



Predictive models for lending are based on supervised machine learning. Often millions of data points are needed to train the models. In addition, there are up to thousands of features that characterize the data points. Training and evaluating the models therefore takes a lot of time. With the help of a mathematical model for combinatorial optimization, the large set of features can be specifically reduced to a small number of the most meaningful features. Risk Managers can react quickly and flexibly to changes in the market.



Portfolio managers strive each day to maximize returns whilst minimizing risk to achieve the so-called efficient frontier. QIOS delivers a processing superpower which enables them to go beyond that and find the optimal frontier where a wide range of defined factors that balance high- and low-risk investments with daily return targets are calculated at speed. The Quantum-Inspired approach means that more complex models can be run more often to add a critical dimension to decision making hour by hour.



Impact Chain Analysis in risk management displays and recognizes dependencies and chains of effects using information from payment flows between businesses. It identifies possible risks and allows the simulation of different scenarios, including worst case scenarios. Improved outcomes include a better risk assessment, more detailed portfolio analyses and increased customer satisfaction.

Optimize everything, always

QIOS delivers the power to focus on optimization in any area of your business by enabling you to transform the way you deal with combinatorial optimization challenges. It's a power you can focus on the way you work across your organization and how you engage with your markets.

So, you can:

- Identify the addressable, valuable outcomes you want from your Digital Transformation through our unique Human Centric Design co-creation methodology and with the support from Functional or Industry Consultants which puts you and your needs at the heart of how QIOS works across your enterprise. Our Digital Annealer is the processing superpower which delivers transformation at lower risk. Our Proof of Business consultancy ensures you stay focused on achieving your objectives.
- Start quickly: our Quantum Inspired-Optimization Services are powered by the Digital Annealer technology that is available now and already helping businesses overcome their combinatorial optimization challenges.
- Control costs: PoBs control initial costs whilst testing the real business case. Flexible delivery options provided on premise or through the cloud 'as a service', help control CAPEX/OPEX.
- Overcome skills gaps to ensure you have the right internal skills to achieve your ambitions, we offer an end-to-end solution which includes platform consulting, integration, training and support services.
- Integrate it all with your existing operations – that's essential to leverage value, so we integrate Digital Annealer cloud services to legacy infrastructure. When it's more appropriate, QIOS is also available on-premise and comes with full integration support and services.



Beyond optimization to always optimal

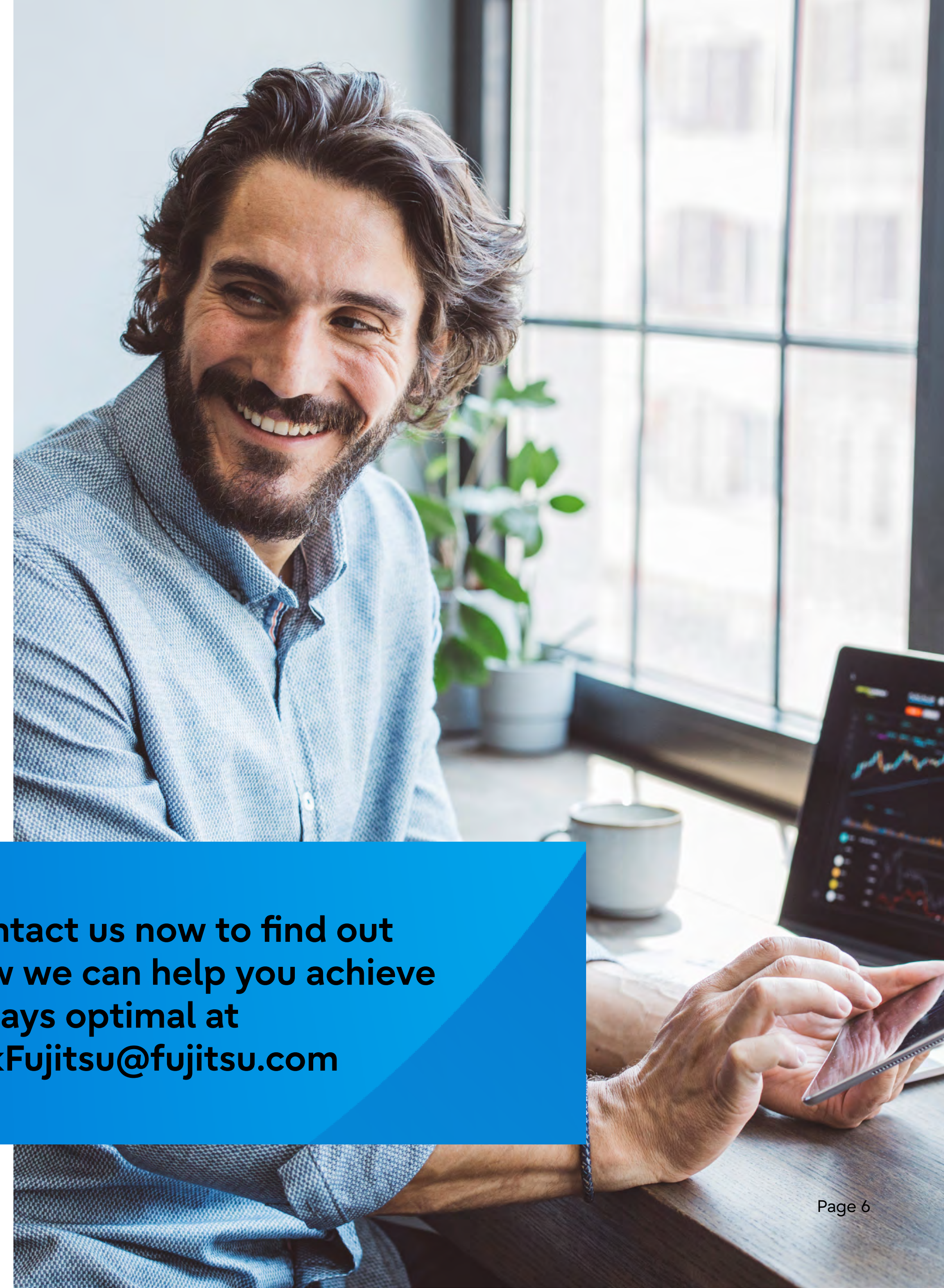
You can drive those key benefits that really matter, to your business now and over the long-term:

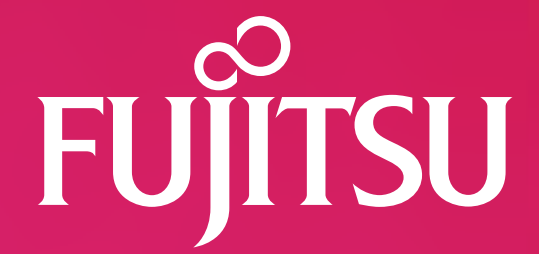
- **Productivity gains:** with systems and processes transformed to drive even higher productivity by optimizing processes, systems and assets.
- **Greater efficiency:** optimize your processes as often as needed, meaning you're constantly running at maximum efficiency.
- **Transformation:** by reaching a new level of business transformation in your Digital Transformation (DX) journey.
- **Flexibility:** through the ability to become always optimal from a range of more dynamic processes, operation or environments.
- **Trust:** that your business is running at always optimal and there's no more cost/outcome trade-offs, with the comfort from more accurately constrained models, that are operating efficiently.
- **Sustainability:** by running at always optimal, your organization is being a more resourceful and sustainable business.

As we've stressed, QIOS enables you to ask more complex questions and achieve combinatorial optimization using lightning fast, innovative quantum-inspired computing. If you can make the most of your data, see more, do more, learn more, and do it all faster. That means you're always optimal – always ready to cope with the things you can't control, and control those you can in ways which drive your business forward, delight, engage, and surprise your customers, and grow your business no matter how challenging the market becomes.

Ensuring that your business is always optimal is critical in a rapidly changing financial sector.

Contact us now to find out how we can help you achieve always optimal at AskFujitsu@fujitsu.com





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