

JOINT MEDIA RELEASE

BCA PARTNERS MICROSOFT TO LEVERAGE IOT, DATA ANALYTICS AND THE CLOUD FOR NEXT-GENERATION GREEN MARK BUILDINGS

- Pilot project leverages the new Chiller Efficiency Smart Portal, powered by Microsoft Azure, to help building managers and owners gain insights and take pre-emptive actions to enable greater energy efficiency and enjoy sustained savings

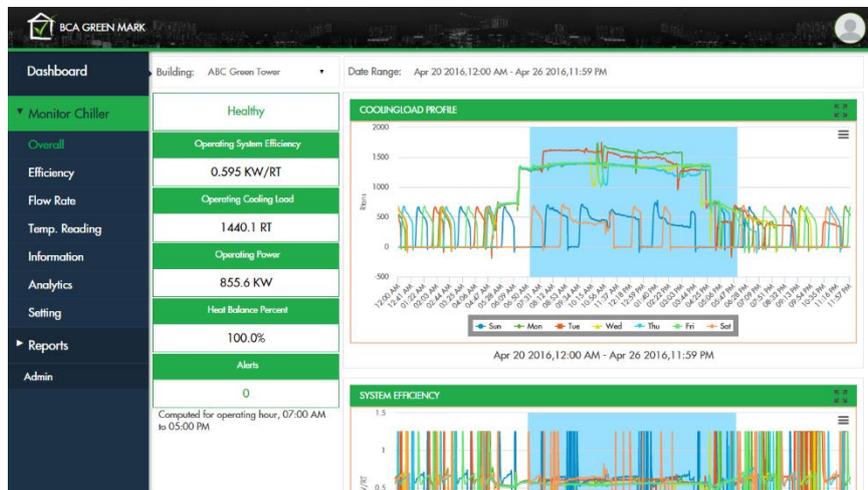


Figure 1: BCA's new Chiller Efficiency Smart Portal

1. **Singapore, 7 September 2016** – The Building and Construction Authority (BCA) today announced that it has partnered Microsoft to harness the power of the Internet of Things (IoT), data analytics and the cloud computing, to manage chiller plant efficiency and complement its Green Mark rating system for next-generation green buildings. As the first government agency to implement an integrated IoT solution for chiller plant efficiency, the pilot project centres on the development and use of a new Chiller Efficiency Smart Portal that will cater to 30 commercial and institutional buildings over a two-year period. Powered by Microsoft Azure, the Portal monitors chiller plant performance, and provides actionable insights which enable energy savings.
2. BCA's Green Mark scheme is a green building rating tool designed for buildings in the tropics and sub-tropics. Under its 3rd Green Building Masterplan, BCA is focused on addressing the environmental impact caused by buildings and charting green building

policies to track and improve the energy efficiency of the built environment in Singapore. With buildings in Singapore consuming about one-third of the nation's electricity, and chiller plants taking up to half of the total building energy consumption, optimising chiller plant efficiency is therefore key to reducing the impact of buildings on their environment.

3. "Monitoring by itself does not save energy, it must trigger an action. This Chiller Efficiency Smart Portal will empower facilities managers to target specific areas for improvement and optimise their energy efficiency. The Portal also provides productivity tools to monitor a portfolio of buildings; and analysis tools to compare energy use and performance trends," said Mr Ang Kian Seng, Group Director, Environmental Sustainability Group, BCA.
4. Designed to be universal to cater to different chiller plant systems, the system uploads chiller plant performance data such as power, water flow rate, temperature, to the Portal which is hosted on Microsoft Azure. Through machine learning and automatic baselining, the Portal can help detect chiller plant performance deviations that may potentially result in energy wastages. Upon detection of such irregularities, building managers and owners will be alerted via email or SMS, and be shown reports of the chiller performance summary, to help them take proactive and pre-emptive actions to optimise chiller performance and save energy.
5. "The Chiller Efficiency Smart Portal provides building owners with a performance summary report of the chiller plant at a glance. It also provides a suite of analysis and graphing tools for building owners to select, analyse and download these data conveniently. I foresee enthusiastic uptake of this Portal and hope that all users will turn the insights it provides into actions to optimise their chiller plant," said Mr Kenny Low, Senior Facilities Supervisor, United World College of South East Asia.
6. In addition to delivering actionable insights to facilities managers and building owners in a timely manner, the Portal also provides them with a dashboard of the chiller plant performance data collected from the portfolio of buildings under their management. With easy access to comparisons of chiller plant performance trends across multiple buildings, they can make quick and insight-based decisions on scheduling preventive maintenance, and to negotiate performance-based contracts with their chiller service providers.

7. The two-year pilot will be implemented in phases until end-2017. When completed, the Portal could potentially be an integral part of Green Mark to encourage buildings to re-certify and improve efficiency continually.
 8. “Sustainability is a topic of concern for every city in the world today. We at Microsoft are delighted to be partnering BCA, the green leader for Singapore’s built environment, to harness the capabilities of our intelligent cloud to help them gain insight and take action from data for increased energy efficiency. This digital transformation will not only strengthen BCA’s push towards becoming a global leader in green buildings, it is also a significant step towards building a better and more sustainable future for the people in Singapore,” said Mr Foo Jong Tong, Public Sector Director, Microsoft Singapore.
 9. The new Chiller Efficiency Smart Portal will be showcased at the BCA pavilion during the Build Eco Xpo (BEX) Asia from 7 to 9 September 2016.
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About Building and Construction Authority

The Building and Construction Authority (BCA) of Singapore champions the development of an excellent built environment for Singapore. BCA’s mission is to shape a safe, high quality, sustainable and friendly built environment, as these are four key elements where BCA has a significant influence. In doing so, it aims to differentiate Singapore’s built environment from those of other cities and contribute to a better quality of life for everyone in Singapore. Hence, its vision is to have "a future-ready built environment for Singapore". Together with its education arm, the BCA Academy, BCA works closely with its industry partners to develop skills and expertise that help shape a future-ready built environment for Singapore. For more information, visit www.bca.gov.sg.

About Microsoft

Microsoft (Nasdaq “MSFT” @microsoft) is the leading platform and productivity company for the mobile-first, cloud-first world, and its mission is to empower every person and every organisation on the planet to achieve more.

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