

# Low-cost Facial Recognition: Microsoft's Cognitive Services Arrives in Calgary

## How the Calgary Drop-In Centre Used Microsoft's Azure Cognitive Services for Fast and Accurate Identification

### Challenge

The Calgary Drop-In Centre (DI) is a key provider of shelter, programs, and services to those experiencing homelessness, marginalization, and extreme poverty.

When providing 1.2 million meals, almost 100,000 articles of clothing, and more than 400,000 shelter beds annually, even small improvements have huge impacts. With this in mind, Sierra Systems, an NTT DATA Company, and the DI investigated two areas: smart automation of client identification and streamlining back-office processes.

### Solution

The Microsoft stack was leveraged for its computability, scalability, and affordability. In the back-office, consolidating legacy business processes, tools and databases to Microsoft Dynamics has brought estimated annual ROI of \$2 million.

For client identification, a non-intrusive facial recognition Proof-of-Concept was established, using Microsoft Cognitive Services and the Face API service in Microsoft Azure. A standard web cam sends facial images to Microsoft's Facial Recognition API in the Microsoft Azure Cognitive Services, where Machine Learning algorithms quickly find matches in the database with 95% accuracy. Matches can inform staff if a client has previously attended the shelter and help the DI on their journey to becoming a more effective homeless shelter.

### Benefits

The economic savings and targeted technology improvements of Microsoft Azure provide a solid foundation for long-term development. Future planning looks to the integration of blockchain technology to increase an individual's control on their personal data. Combined with newer tools, such as blockchain's decentralized identifier, clients control what data is shared between agencies. By sharing, they can reduce how often they need to re-tell their story to obtain services while still owning their personal data.

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