



ANALYTICS & REPORTING

DATACON AFRICA 2019



Building a Trusted & Value-Adding Data Analytics Office

THE DIFFERENCE BETWEEN A "COLLECTION OF REPORTS" VERSUS A HIGH-VALUE INFORMATION SOURCE



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CONTEXT

MEDICLINIC BACKGROUND

KEY FIGURES – AS AT 31 MARCH 2018

	SWITZERLAND	SOUTHERN AFRICA	MIDDLE EAST	SPIRE
BEDS	1,805	8,131	748	1,800
HOSPITALS	17	54	6	39
OUTPATIENT CLINICS	4	18*	24	12
MARKET POSITION	#1	#3	#1	#2

*Includes Intercare group investment in 18 multi-disciplinary primary care medical and dental centres.

KEY FINANCIALS – FOR THE 12 MONTHS TO 31 MARCH 2018



UNITED KINGDOM H (SPIRE HEALTHCARE GROUP) SWITZERLAND (HIRSLANDEN) MEDICLINIC MIDDLE EAST / \geq MEDICLINIC SOUTHERN AFRICA

THE FUTURE IMPERATIVE

MEDICLINIC

Medicine of the future will look different and care and engagement will be delivered through an integrated system and to a lesser extent face-to-face.

Digital healthcare, and particularly Artificial Intelligence, is already changing the way in which healthcare is delivered.









Big Data & Analytics, Machine Learning, Al

- Significant volumes of data emanating from Medical IOT
- 2016 16.1-trillion gigabytes
- 2025 163-trillion gigabytes



Scope of Digitisation

ANALYTICS CONTEXT

VISION

Enable data-driven, smart healthcare through Advanced Analytics and Artificial Intelligence globally

MISSION

To extract actionable insight from data that addresses business questions

- Focus on generating management, clinical and strategic information to provide business insight over a wide range of business activities through AA and ML.
- The department is also responsible for the development and refinement of alternative fee models, complex tariff calculations and risk-adjusted benchmarking.



VALUE PROPOSITION

ADVANCED ANALYTICS VALUE CHAIN



UNSTRUCTURED DATA

BUSINESS ANALYTICS HOW ANALYTICS PROVIDE VALUE





BUSINESS APPROACH

MACHINE LEARNING BUZZWORDS





"If you've got terabytes of data, and you're relying on machine learning to find interesting things for you, you've lost before you've even begun" – Herb Edelstein (President of Two Crows Corporation)

MACHINE LEARNING WHAT WE PLAN TO DO WITH ML?



What if we could use AI to predict future health outcomes with precision, timeliness and speed?

We could significantly reduce operational costs of care, improve the efficiency and accuracy of clinical decisions, while providing high quality care and improving patient satisfaction.





ESTABLISH ML TEAM

PLATFORM, TOOLS & DATA



IDEATION







- **Curate development** of inhouse ML talent/capability (providing training to develop deep technical understanding of ML and DL techniques and tools)
- Build up an ML capability to support the whole company
- **Ongoing education** to keep up-to-date with evolving technology













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ESTABLISH ML TEAM





IDEATION





Build the **foundation** and invest in deep learning tools •





- Machine learning is only as good as the data it learns from (we need data)
- Unified data warehousing standards and strategic data acquisition •













- Enable **basic business understanding** of AI including technology, major classes of algorithms and know what is possible (data and algorithm constraints)
- Define **use cases** (measurable objectives that creates business value)
- Collaborative working of business people and data scientists is the key to success!

















Doubtful Dave Won't give up control to

algorithms, needs tangible evidence



Starstruck Sam Thinks Machine Learning can do everything



Hasty Harry Loooooves Machine Learning, want it everywhere, but doesn't understand that it's not 100% accurate

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ESTABLISH ML TEAM

PLATFORM, **TOOLS & DATA**



IDEATION





- Get the flywheel spinning so that ML projects can gain momentum ٠
- **Partner** with external teams •
- **Execute on initial projects** to support different divisions ٠











EXECUTIVE SUPPORT

ANALYTICAL SUCCESS THE EXEC SPONSOR's ROLE





Hank you.

DIFFERENT PERSPECTIVES ON THE PROBLEM AND ...



MCI ADVANCED ANALYTICS & REPORTING STRATEGIC FOCUS AREAS



Clinical indicator development Clinical DW development

MEDICLIN

23



Mature/

Visionary

5

Corporate

Adoption

4

5

Adoption

3

Pre-

adoption

2

Rating Scale

Nascent

1

Current Level

Stage 1 Analytically impaired

VALUE PROPOSITION, VISION & OBJECTIVES VALUE PROPOSITION





ARTIFICIAL INTELLIGENCE HUMANITY



"As more and more artificial intelligence is entering into the world, more and more emotional intelligence must enter into leadership"

Admit Ray