

MANY TO ONE: HOW CAN DATA BE AGGREGATED TO TELL THE STORY OF INDIVIDUAL FARMER CHANGES TO THEIR COMMUNITIES

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Environmental management, sustainability, consent conditions and water quality are all terms today's farmers are becoming increasingly conversant in. Knowledge in these areas is now just as important as traditional farming knowledge like animal health and fencing. These topics are all part of the new digital era of measurement and compliance. As regulations come into effect to ensure standards of water quality are met a lot of data is being recorded in many formats by many parties to meet these new regulations. Some data is gathered automatically, some manually, some once, some multiple times. Some data is easily accessible once gathered, some is not.

New Zealand society is also interested in environmental management, sustainability, consent conditions and water quality, but for different reasons. That interest is more about what is happening in catchments and regions, rather than individual farms, and they are more interested in the outcomes of compliance rather than the process of compliance.

The technologies and scientific skills now available related to big data, the cloud, data analytics and visualisation have created the potential to enable new insights to be created and, most importantly, communicated to a broad range of audiences with different lenses on the same subject. If an insight isn't understood and isn't compelling, no one will act on it and *no change will occur*.

Bringing these technology solutions together to meet community's need to be engaged and farmer's need to be compliant and acknowledged for that is the objective of NEWMS; Nutrient, Environment and Water Management system. The underpinning 'technology' is storytelling. Data storytelling is a structured approach for communicating data insights, and it involves a combination of three key elements: *data, visuals, and narrative*.

Editor's Note: An extended manuscript has not been submitted for this presentation.
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