

Private & public good research and extension (R&E) roles in precision farming



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Objectives and Method

- Examine public R&E roles in development of NZ precision dairy farming
- Identify important innovation stages
- Timeline analysis methodology used

Benefits

- Determine where engagement and investment by public organizations is justified
- Innovation system analysis can help identify potential collaboration to enhance innovation functions

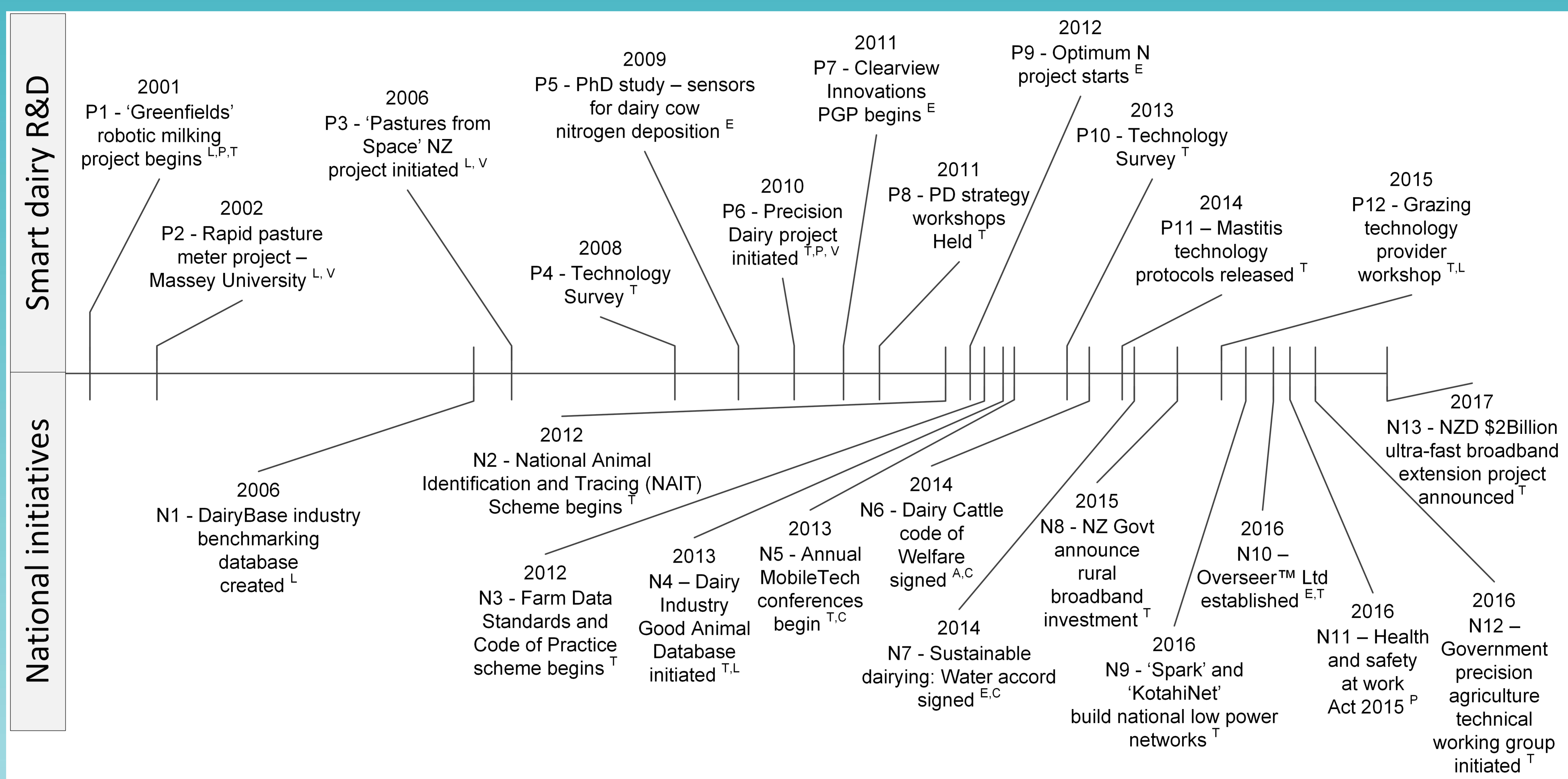


Figure 1 Timeline diagram of major innovation events via R&E projects (labelled P1-P12) and related national initiatives (labelled N1-N13) in NZ precision dairying (2000-2017). Events are also linked to relevant industry issues by the following superscripts: ^V Economics and viability, ^E Environment, ^P People, ^L Lifestyle and business, ^C Community acceptance and connection, ^A Animal welfare, and ^T Technology performance and national infrastructure.

Results

- PD innovation and R&E focused on technology development and on-farm use
- Several key events in the development of NZ precision dairy included:
 - *Livestock traceability scheme (NAIT)*
 - *Greenfields robotic milking project*
 - *Farm Data Standards project*

Conclusions

- Requires greater industry-level leadership to improve performance
- Roles for public organisations include:
 - *leadership on data integration, integration of technology (via standards), assessing performance, development of training programs*
- Focus on more open innovation structures and building farmer skills and knowledge

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