



UNIVERSITÀ
DEGLI STUDI
FIRENZE



Un'agricoltura smart per un futuro sostenibile: nuove tecnologie e casi di studio

Marco Bindi^a, Riccardo Rossi^a, Gloria Padovan^a,
Roberto Ferrise^a, Giacomo Trombi^a

^a Dip. Scienze e Tecnologie Agrarie, Alimentari, Ambientali e Forestali, Università di Firenze

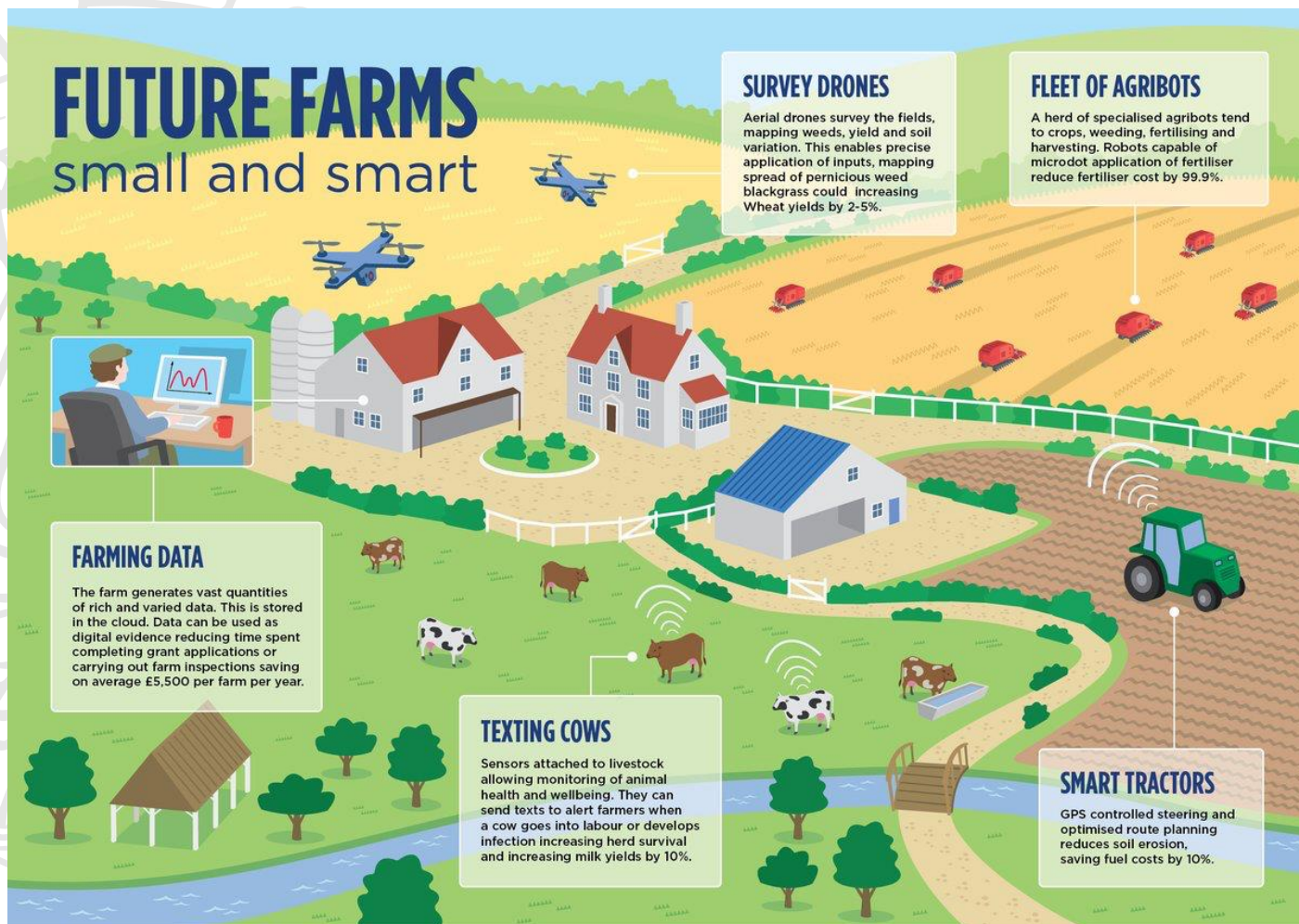


FONDAZIONI IN RETE
PER LA RICERCA
AGROALIMENTARE



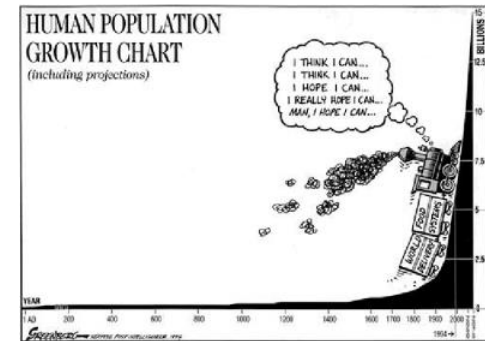
Firenze, 11/07/2019

Fabbriche a cielo aperto



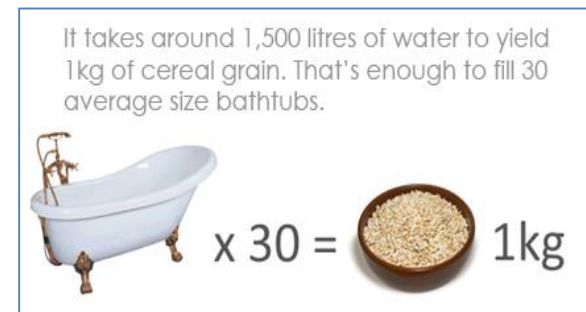
Sfide agro-ambientali del 21 sec.

- Soddisfare la domanda alimentare della crescente popolazione mondiale



- Soddisfare le crescenti esigenze dietetiche dei paesi in via di sviluppo

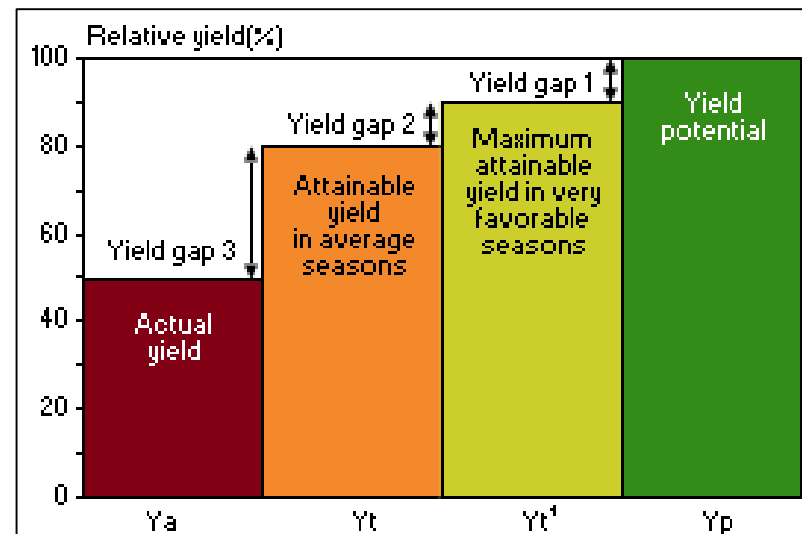
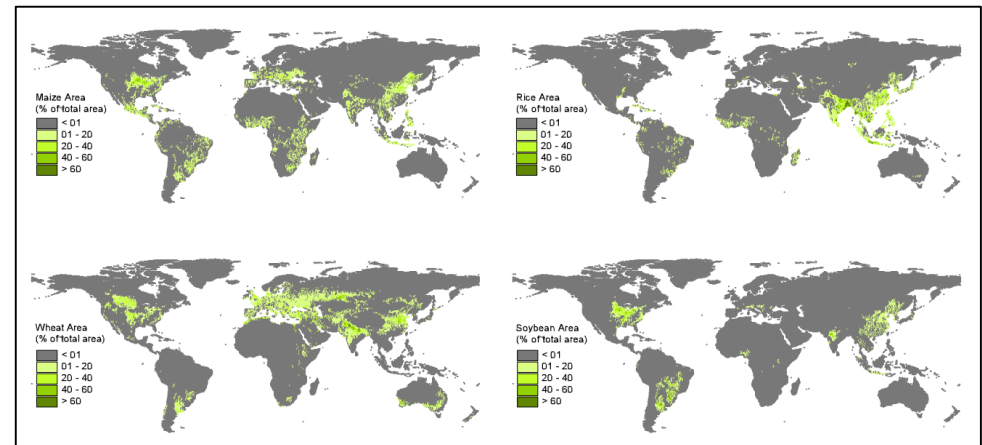
- Confrontarsi con la scarsa disponibilità di terreni e acqua per la competizione di settori concorrenti



- Fronteggiare i cambiamenti climatici

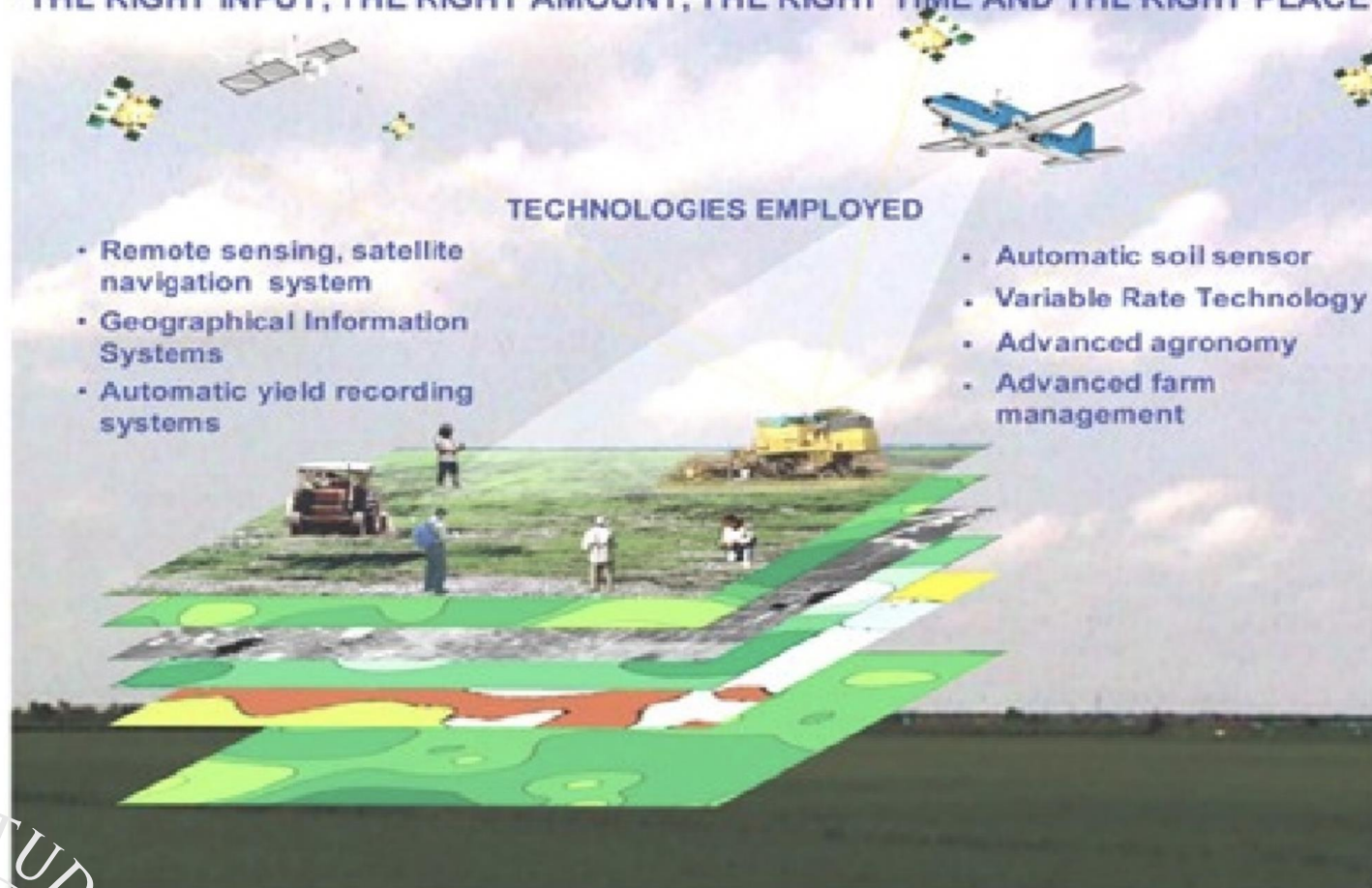
Come possiamo rispondere a queste sfide ?

- **Aumento della superficie coltivata e irrigata**
- **Aumento delle potenzialità produttive (intensificazione sostenibile)**

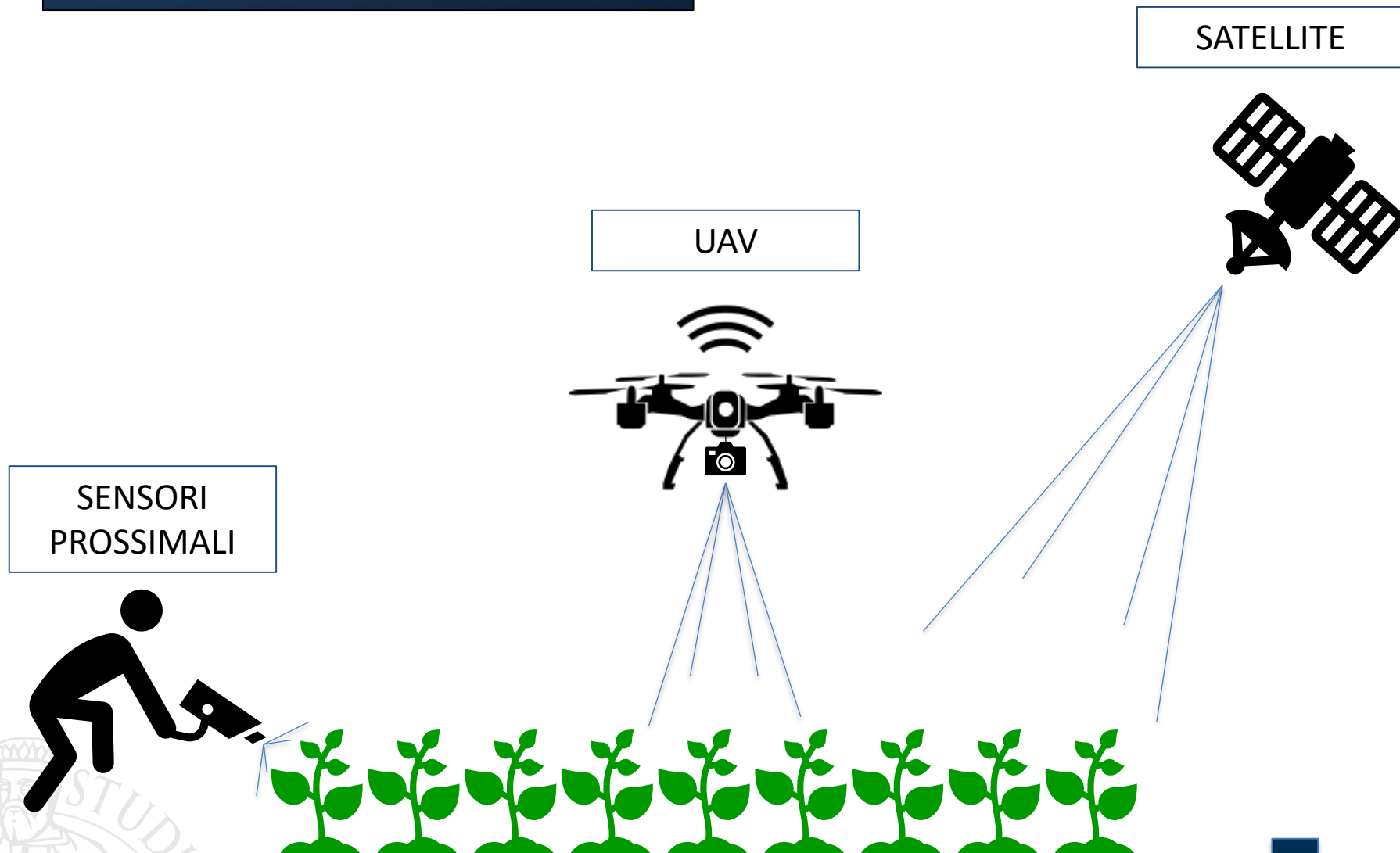


Precision Farming Concept

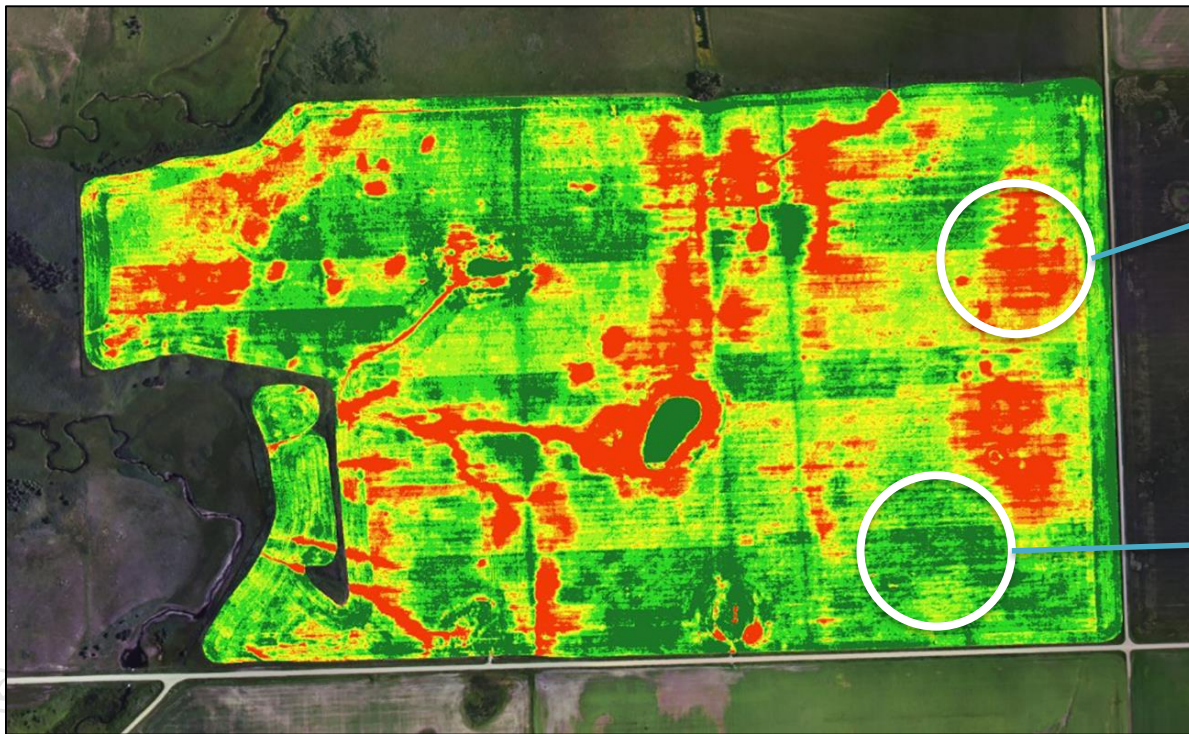
"THE RIGHT INPUT, THE RIGHT AMOUNT, THE RIGHT TIME AND THE RIGHT PLACE"



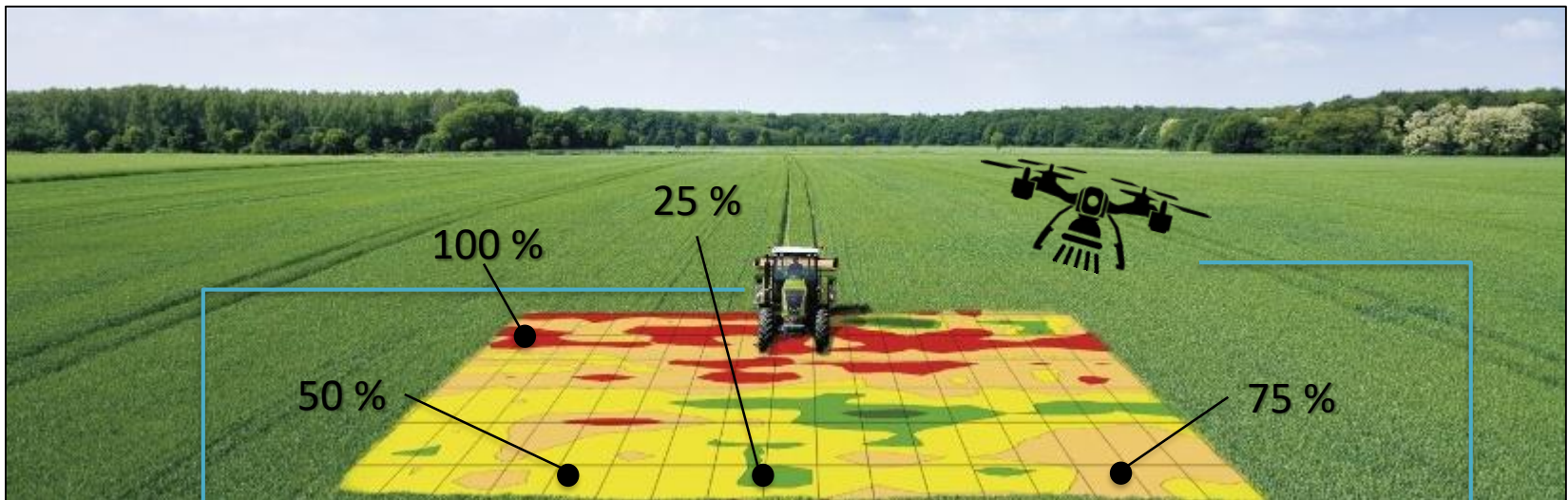
1. Acquisizione dati



2. Elaborazione dati



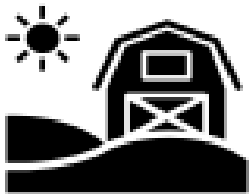
3. Gestione produzione



TECNOLOGIE IN AGRICOLTURA



FERTILIZZAZIONE DI
PRECISIONE



RIPRISTINO AREE AGRICOLE



PREVISIONI RESE



Cambiamento
climatico

1. Fertilizzazione di precisione



Informazioni gestionali

Epoca di semina,
varietà, N in pre-
semina

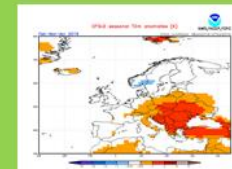
Osservazioni meteorologiche



Climatologia



Previsioni climatiche

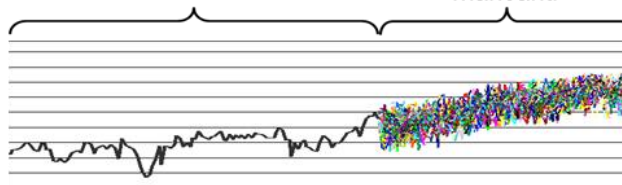


Downscaling Spaziale e Temporale



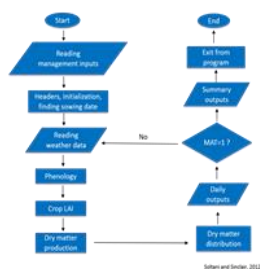
Data meteo osservati

Dati meteo mancanti



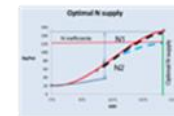
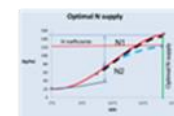
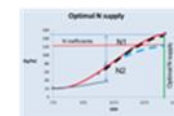
Tipologia di suolo

Field maps

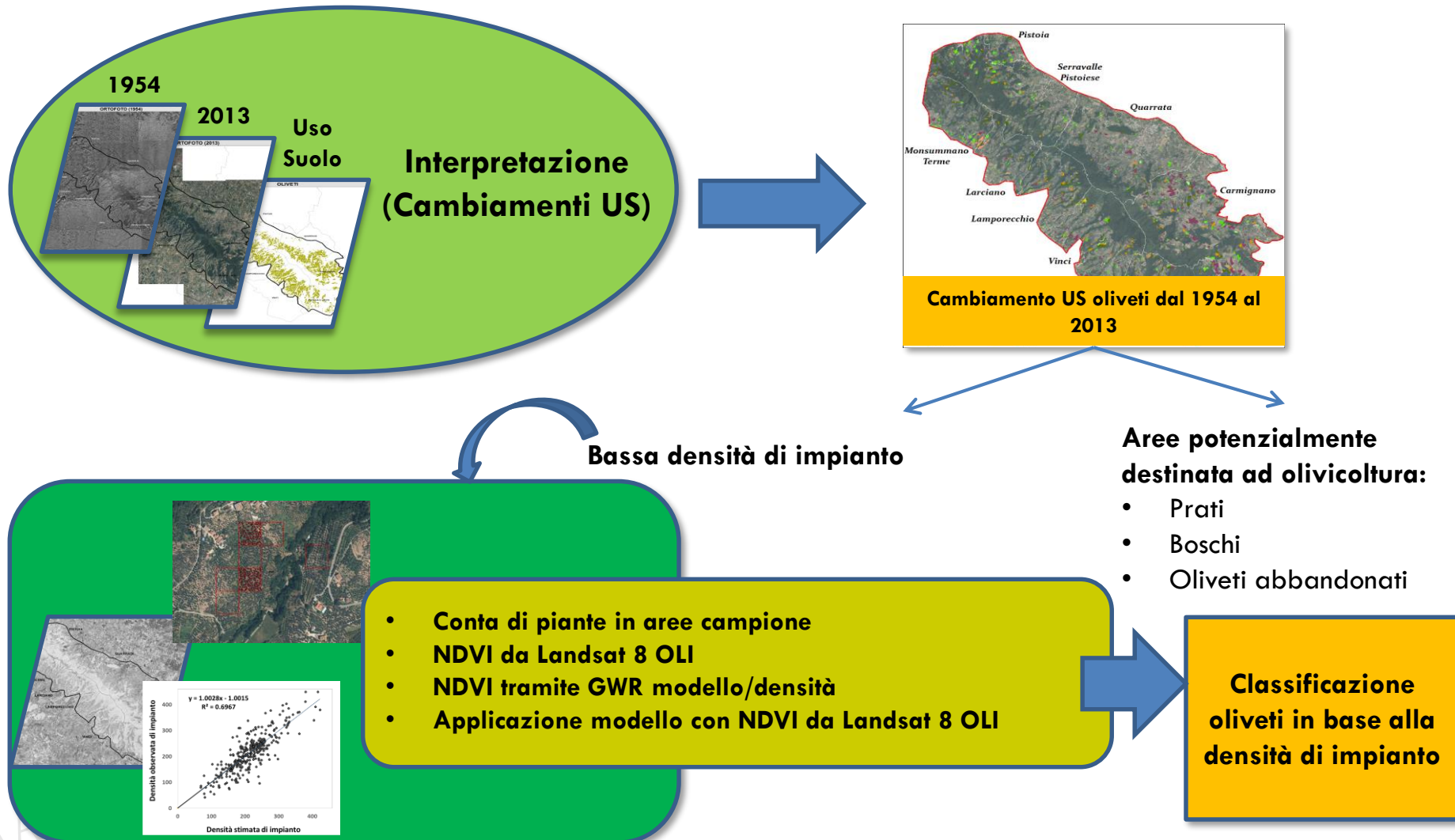


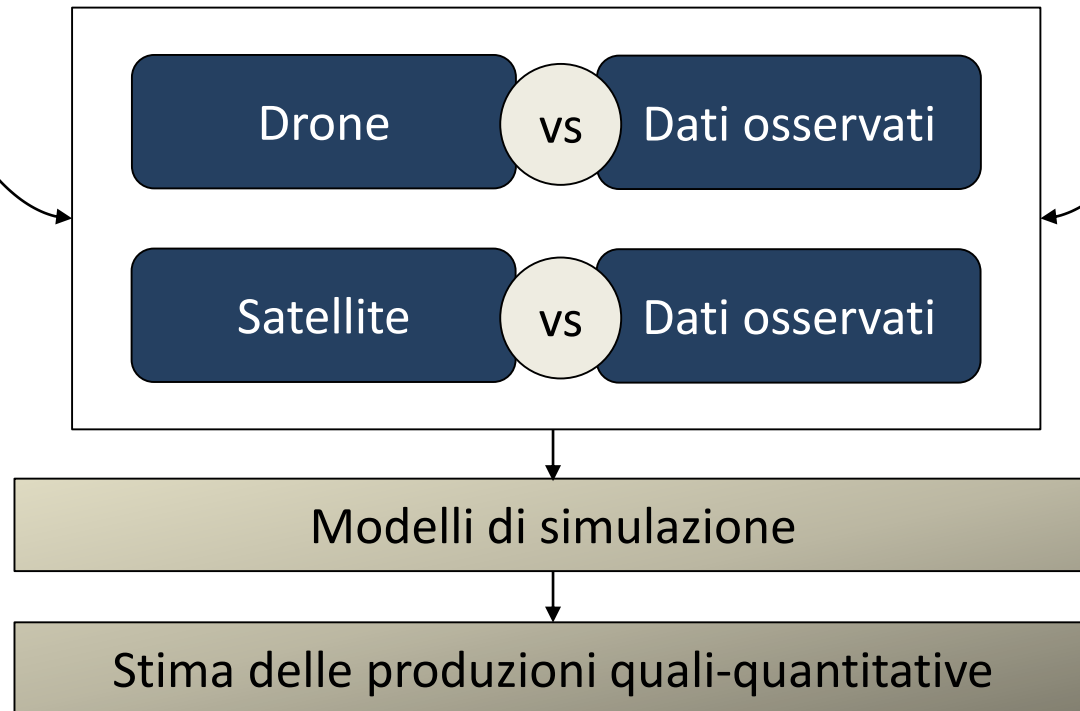
Modello colturale

In-season yield estimates and optimal N supply

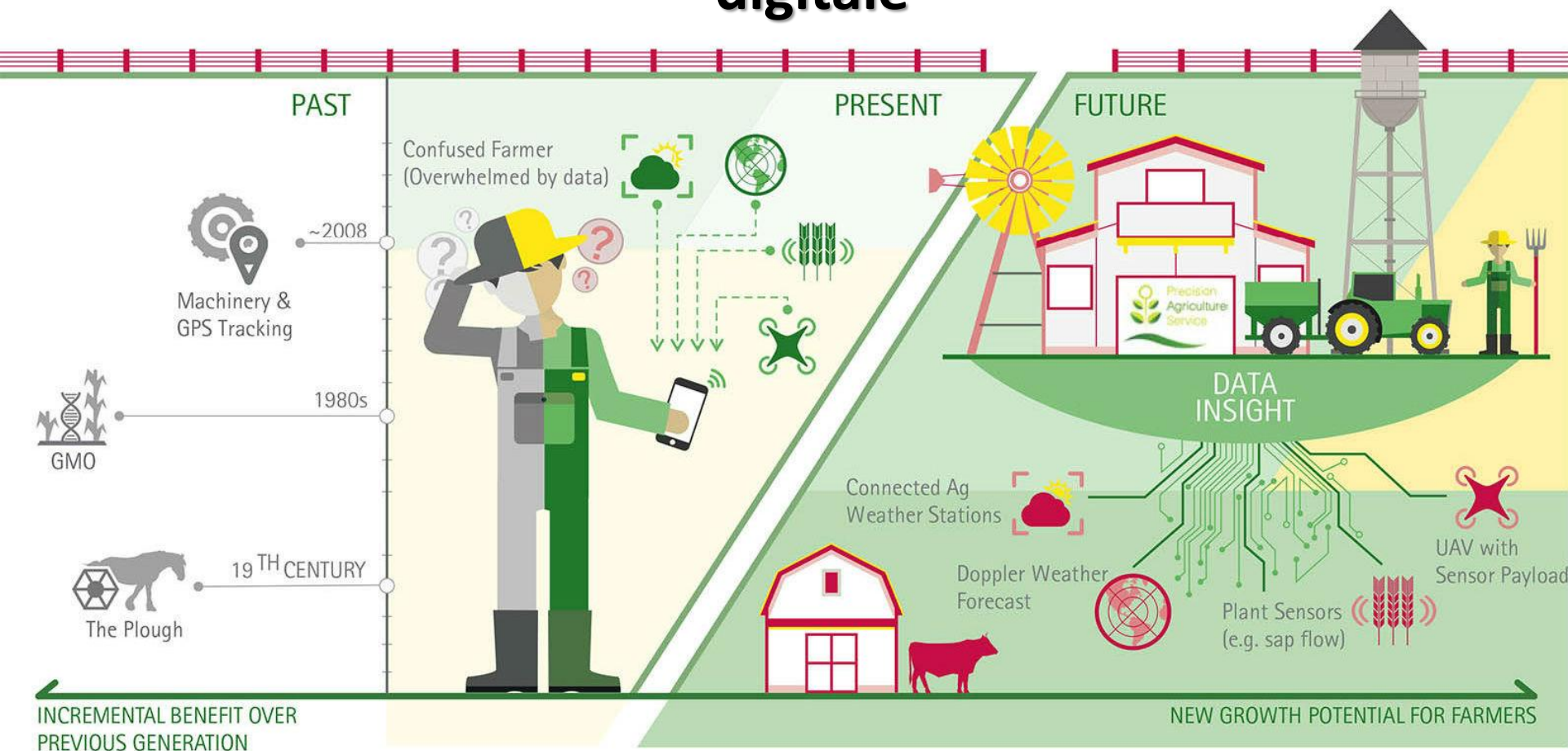


2. Recupero aree marginali





Evoluzione verso una agricoltura sempre più digitale



Grazie a tutti per l'attenzione

