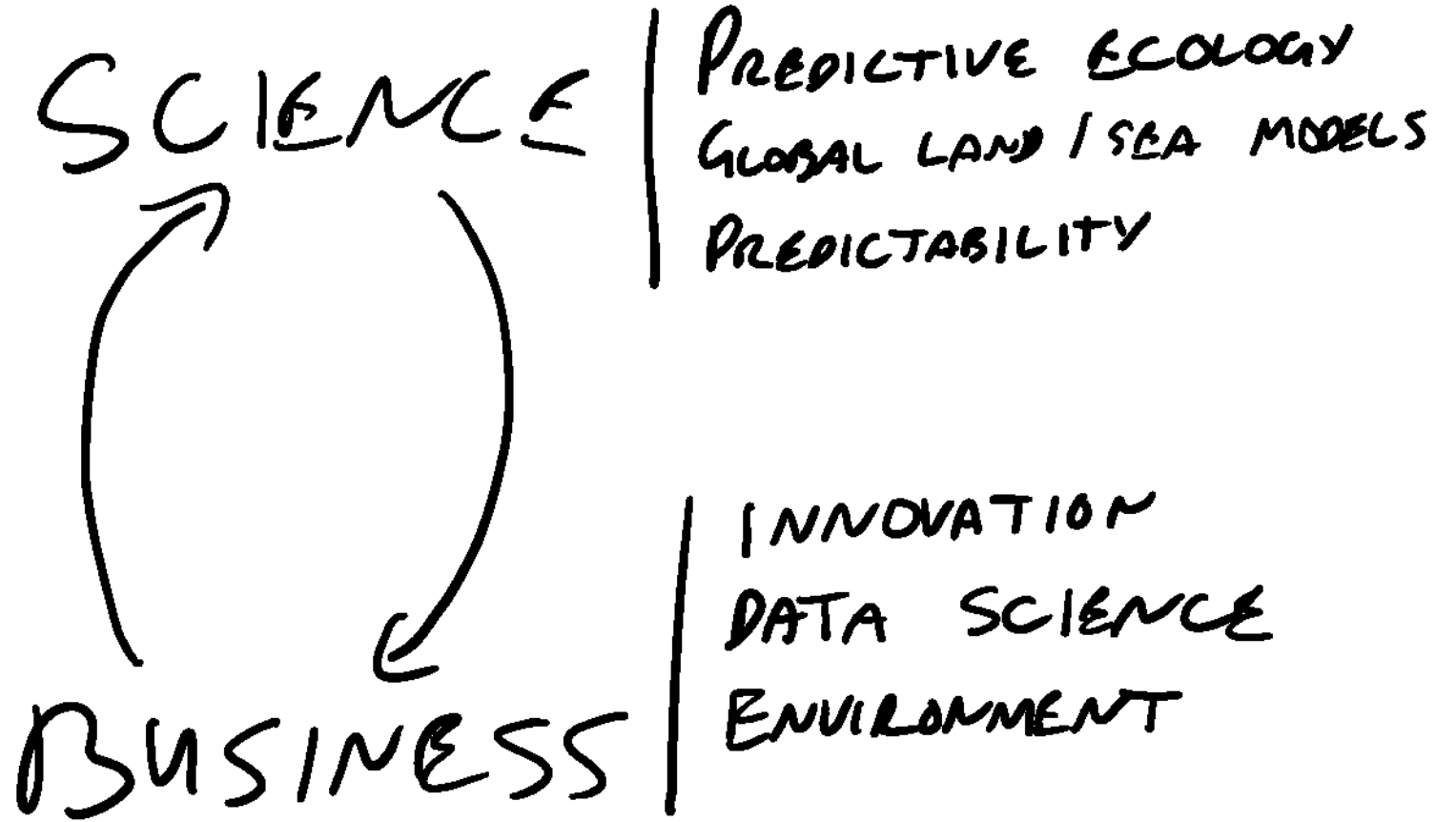
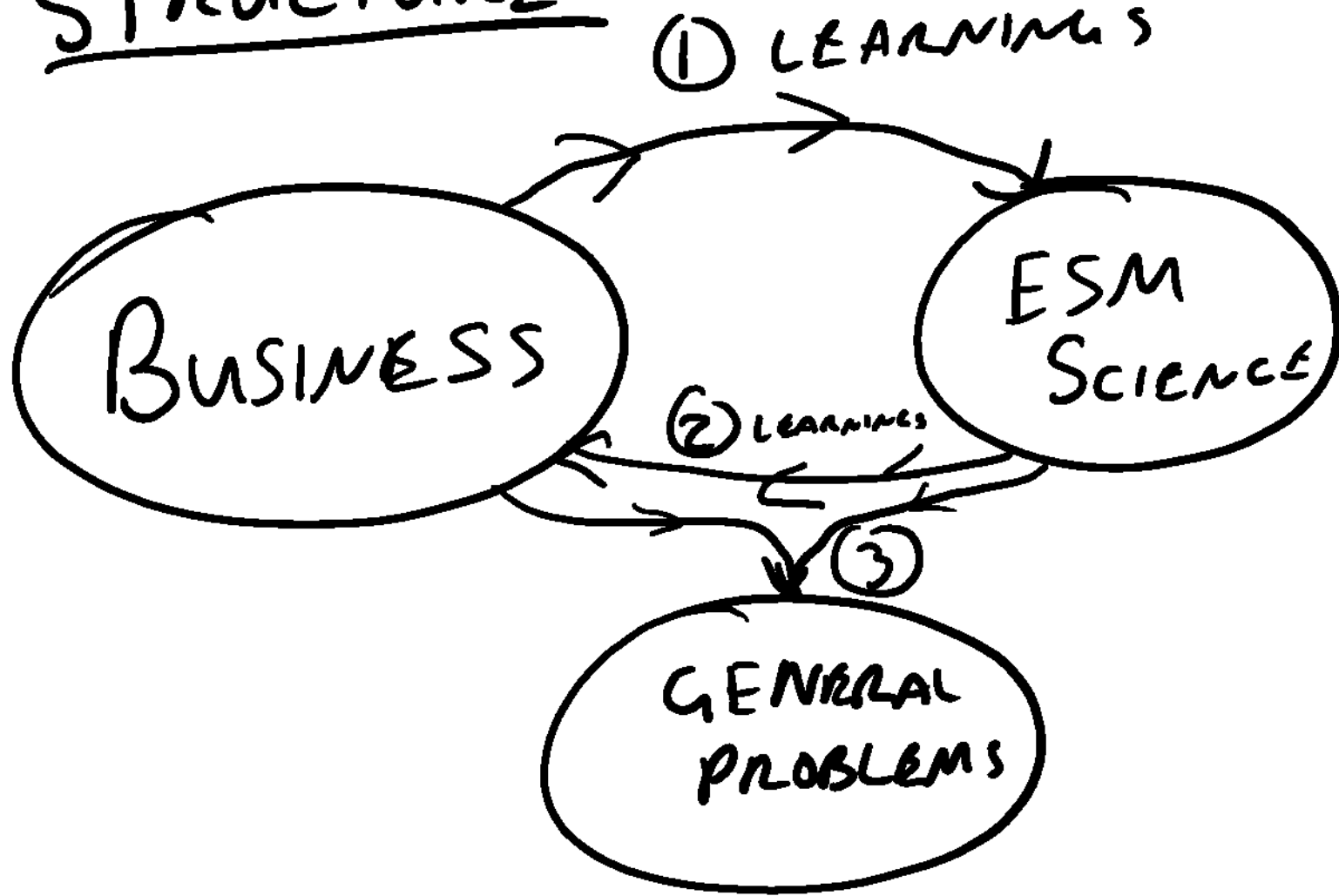


THE FUTURE OF ESMs

MATTHEW SMITH



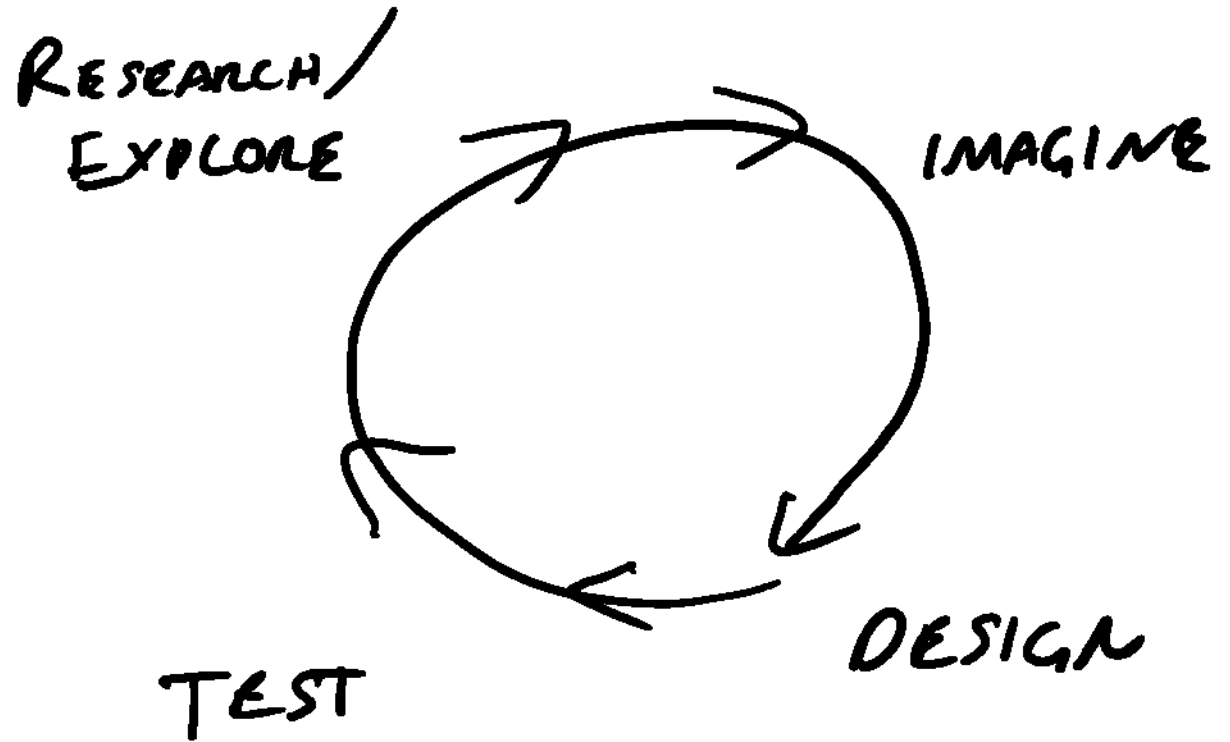
STRUCTURE



IN BUSINESS

- ① VALUE OF DESIGN LED THINKING
 - HUMAN, EXPERIENCE
 - RESEARCH, EMVISION, DESIGN
 - ⋮

DIGITAL
TRANSFORMATION

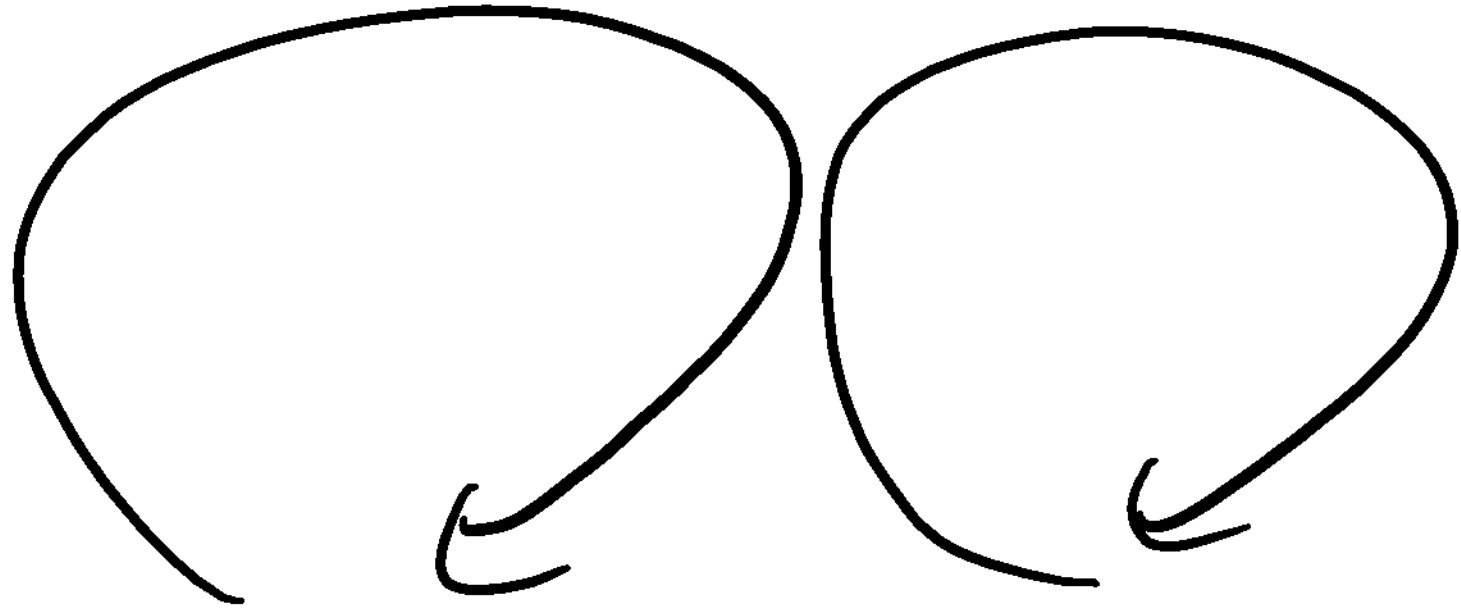




SMALL
EXPERIMENTS



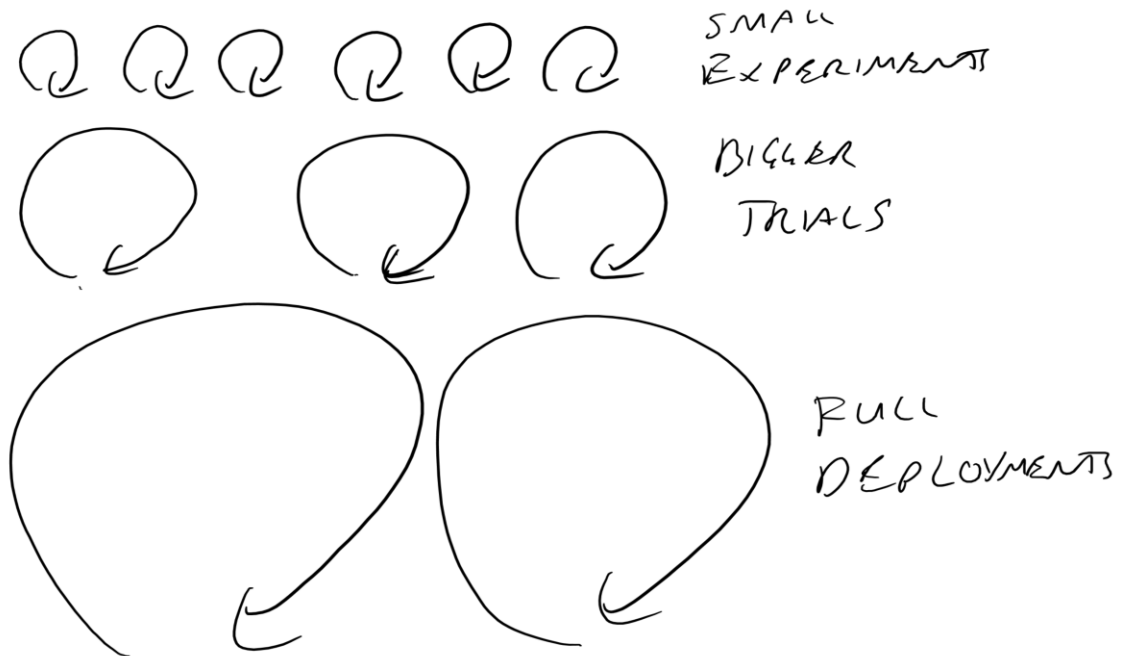
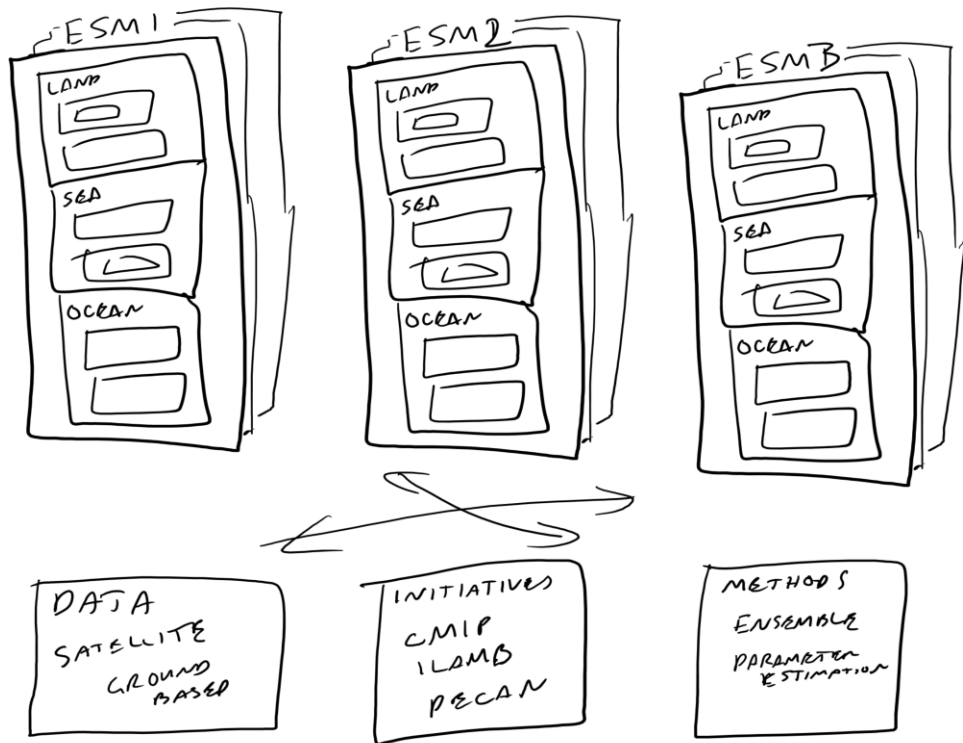
BIGGER
TRIALS



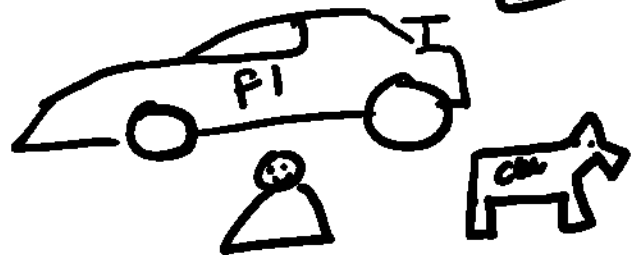
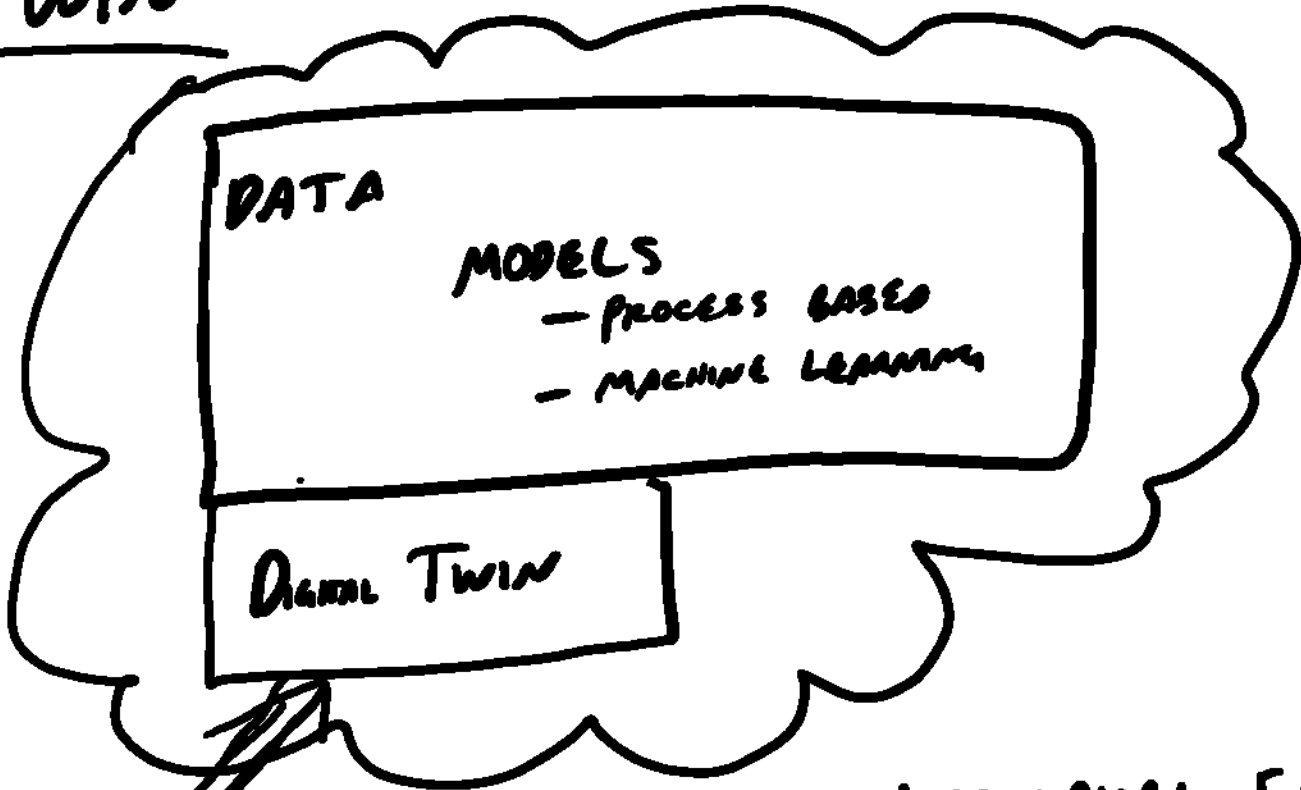
FULL
DEPLOYMENTS

Q: WHAT IS THE RIGHT WAY TO
BREAK UP / MODULARISE WHAT
WE DO?

OR, SIMPLY,
IS THERE A
BETTER WAY?



Digital Twin



- INDIVIDUAL ENTITY FOCUSED
- AUTONOMOUS, BUT WILL TAKE INPUTS
- PREDICTIVE
- ALWAYS ON (EFFECTIVELY)

THE VALUES OF ML (INCLUDING NEURAL NETS)

DISCOVER
PREDICTIVE
ABILITY

WHERE DO WE
SACRIFICE THROUGH
EXPLAINABILITY?

PROVIDE MODEL WHEN
EXPLAINABILITY DOESN'T
MATTER

TRANSFORMING
RAW DATA INPUTS
TO SOMETHING
MORE USEFUL

SPATIAL TEMPORAL
INTERPOLATION

BIAS, WEIGHT
ERROR
CORRECTION OR
DETECTION

ENSEMBLES

HETEROGENEITY

EMERGING TECHNOLOGIES

DATA / INFORMATION GRAPHS



DATA COLLABORATIVES



DATA MARKETS



BENCHMARKING
AUTO-SCALING

ELECTRONIC NOTEBOOKS



SERVERLESS COMPUTING

IOT & EDGE/FOG COMPUTING



CLOUD!

VALUES OF ESMS TO WIDER WORLD

MODELS
& COMPONENTS

DATA &
PREDICTIONS

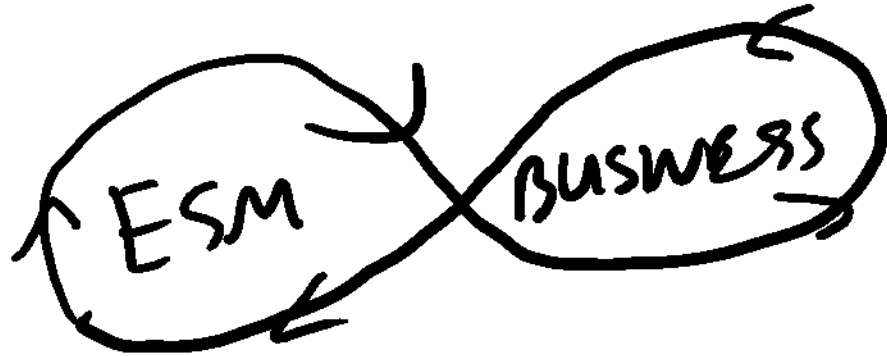
METHODS
ENGINE

PEOPLE

ISSUES FOR BOTH

HAS THE
PURPOSE
CHANGED?

PREDICTABILITY
& PREDICTIVE ABILITY



COMBINING ML
WITH PROCESS
BASED