

DIANA (Not.)  
 - WORKS  
 - 3 people

RDSS <sup>RADAR DSS</sup>  
 - SUPERCELL  
 MAPS (Ger.)  
 HORACE (UW)  
 4 MERCURY (G)

PHOENIX  
 FPA →  
 - GRAPHIC EDITING / Software Professionals

NinJo (H)

**MORE**

**LESS**

- MODIFY LARGE GRIDDED DATABASE, LET FORECASTERS ADD VALUE
- QUICK  
- ergonomic
- RECOGNIZE HUMAN STRENGTHS IN DSS

• LESS "BLACK BOX"

**MORE**

**LESS**

- SOFTWARE/FORECASTER FEEDBACK DURING DEVELOPMENT
- DSS/EXPERT SYSTEM ⇒ EXPLANATION CAPABILITY
- TOOLS TO LOOK AT REAL DATA (US. MODEL DATA) e.g. SATELLITE RADAR (PHOENIX RESULT)
- TO HELP ANALYSIS, DIAGNOSIS, FORECASTING
- RAISE SITUATIONAL AWARENESS
- INTEGRATED DISPLAY

**MORE**

**LESS**

- FORECASTER FEEDBACK TO MODELS/MODELLERS (e.g. systematic errors biases, etc.)
- HUMAN ASPECT: KNOWING WHAT TO LOOK FOR, FAMILIARITY WITH RESEARCHERS' KNOWLEDGE (in U.S.) (DOSWELL: NOT MORE FCSTRS, BETTER TRAINED FCSTRS) P.S. CANADA COULD USE BOTH

**MORE**

**LESS**

- DSS SHOULD PROVIDE INFO TO SUPPORT DECISION MAKING ... NOT - NOT MAKING DECISION
- TIME TOGETHER BETWEEN FORECASTERS & RESEARCHERS
- MORE ENGAGEMENT (NOT "DUMBING-DOWN" (GARY KLEIN))
- REWARD SKILLED FORECASTING (DISCOURAGE TEMPTATION TO "PUSH BUTTON" / AUTO-FORECAST)
- PERSONALIZED VERIFICATION BOOSTS/MOTIVATES PEOPLE (PHOENIX RESULT)

# AUTOMATE ~~vs~~ DON'T AUTOMATE

## ANALYSIS & DIAGNOSIS

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- INSPECT STRUCTURE OF EACH CELL (RDSS)
- MONITORING

PATTERN RECOGNITION (DSS SHOULD EXPLOIT)

- TOO MUCH IS DANGEROUS

INTERESTING TASKS

- FILTER, VARIABLE THRESHOLDS

SQUELCH

- "TODAY'S" PRODUCTS, SERVICES

TOMORROW'S R+D, SERVICE

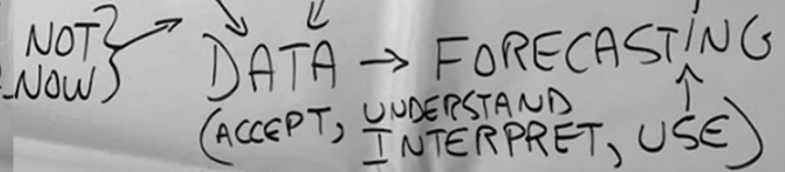
(TREND) TO AUTOMATE RISKS DISCOURAGING 20 SOMETHINGS FROM FORECASTING (CAREER)

NOTE: ON SUR WX DAYS, FORECASTERS DON'T LOOK AT MODELS, USE RADAR & SHORT-TERM TECHNIQUES ALL DAY

# ROLE OF HUMAN (FUTURE)

- GIVE ADVICE TO CLIENTS BASED ON DEEP UNDERSTANDING OF CLIENT NEEDS, AND OF PROBABILISTIC PRODUCTS
- RISK: E.P.S. MAKES HUMAN DECISION MAKING IRRELEVANT (E.P.S. → "END RUN" AROUND FCSTRS?)
- EMPHASIZE TO USERS WHAT'S IMPORTANT TO THEM

HYDROLOGY, AGRICULTURE



# INCREASE AUTOMATION, MAINTAIN EXPERTISE

## ANALOGY TO PILOTS

- NEED TO SWITCH TO MANUAL MORE TO STAY CHART FLYING
- SIMULATORS → WEATHER

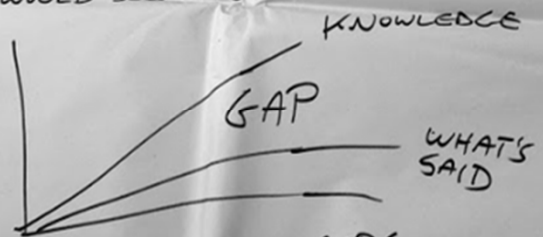
eg. NinJo

- SIMULATE
- CASE CAPTURE

# NEW PRODUCTS

VIA DSS

- E.P.S.
- NOWCASTS, GRAPHIC WITH ALL NEW INFO
- HIGH IMPACT WEATHER
  - CALL FOR PROBABILISTIC INFO (even for temps ~ 0°C)
- HWVR - REGULAR PROB. INFO WOULD SENSITIZE PUBLIC



- DETERMINING WHAT USERS CARE ABOUT
- TELL POTENTIAL USERS ABOUT INFO WE HAVE

- ABILITY TO ISSUE EMERGENCY BROADCASTS (e.g. TORNADO, FREE FORM MESSAGE, ON RADIO & T.V.)
- TARGETTED TEXT MESSAGES