

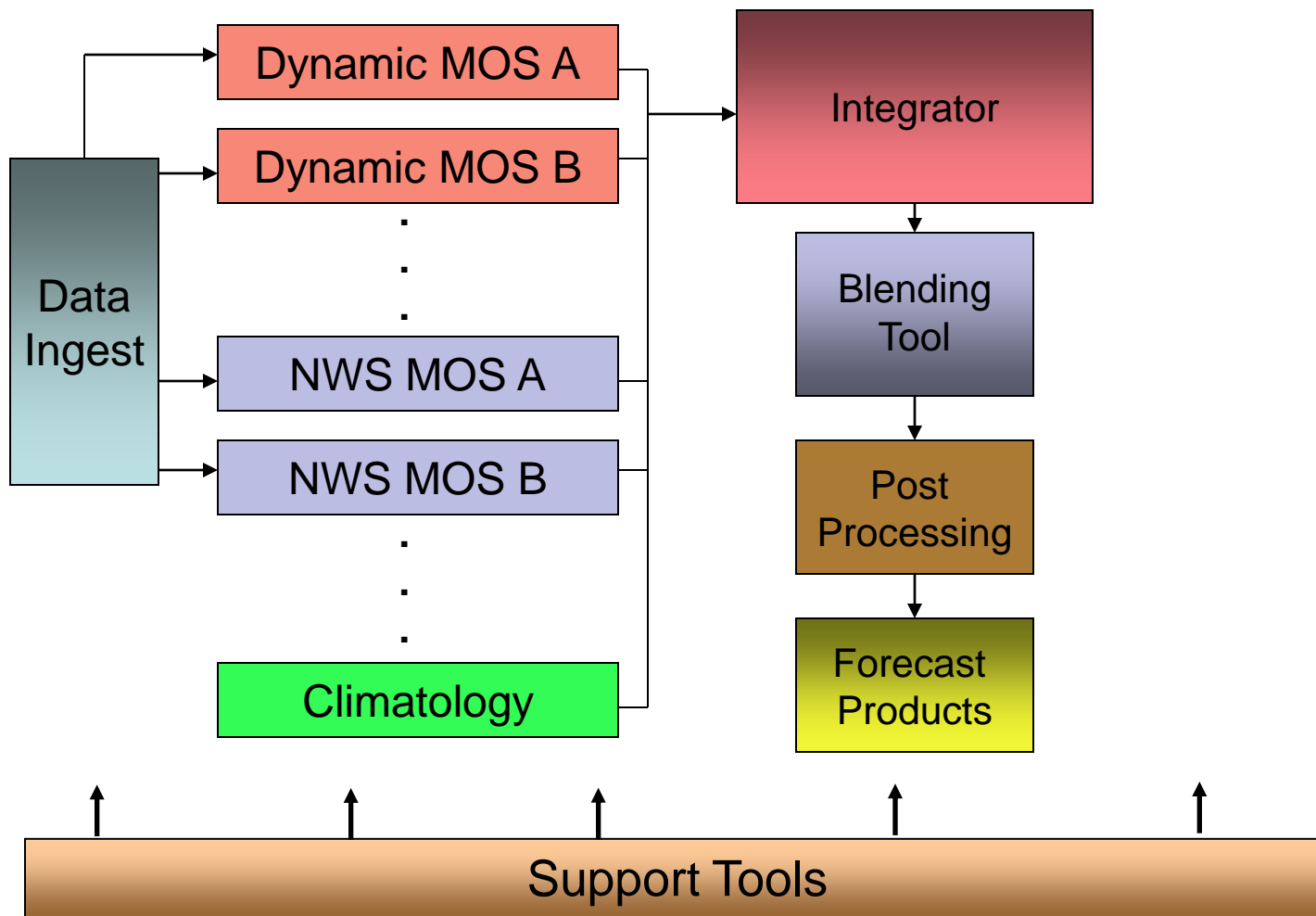


# Dicast Quick Facts

- Developed 2000 by NCAR/RAL
- Significantly revised by WSI between 2000-2003
- 19,854 sites worldwide, 9800 in CONUS
- 5563 core sites worldwide, 1550 core sites in CONUS
- 16 forecast days
- 3hr time resolution
- Runs five times per day - 0,4,6,12,16Z, taking advantage of recent model data arriving around these times

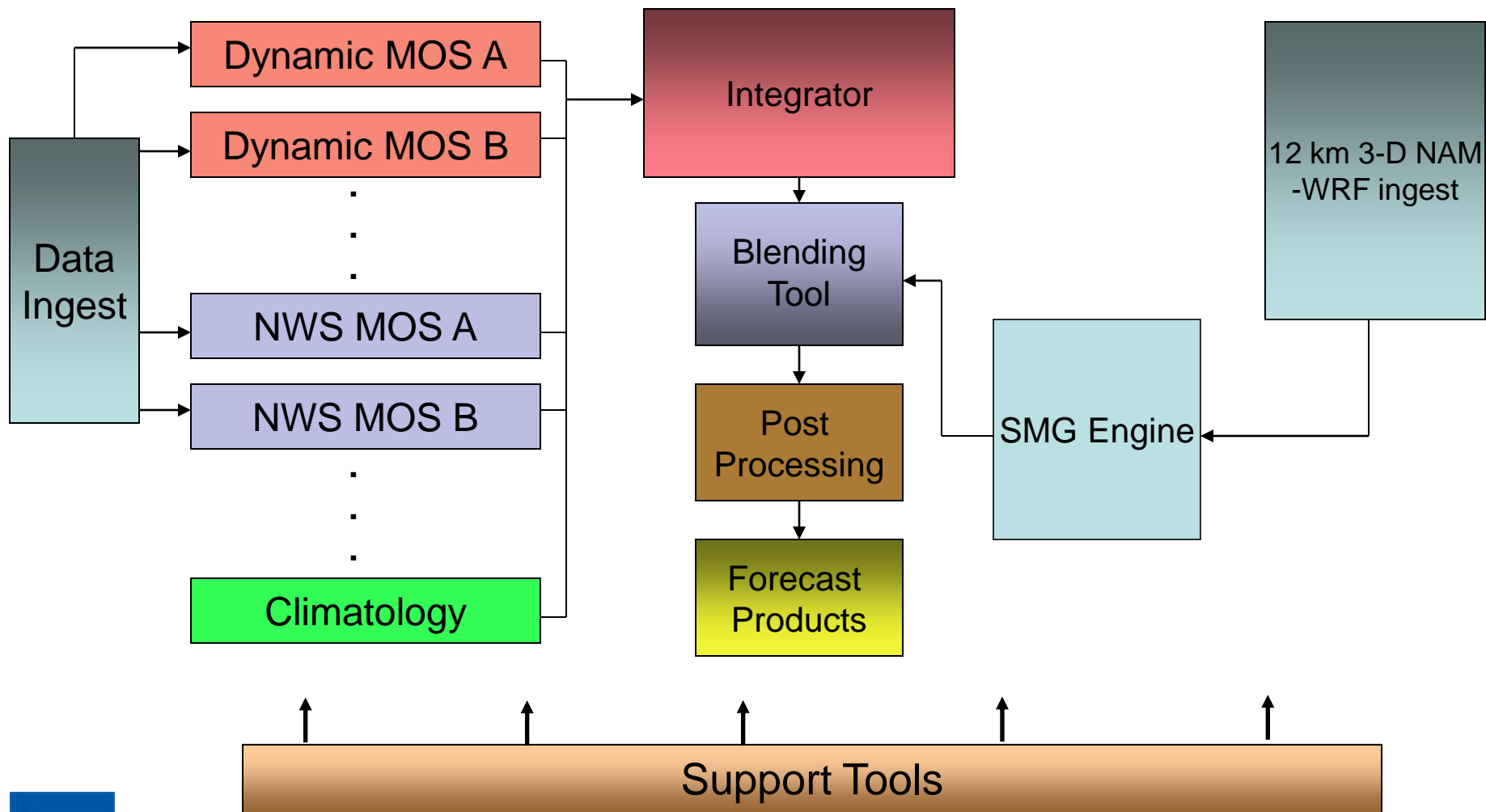


# DICast System Basics

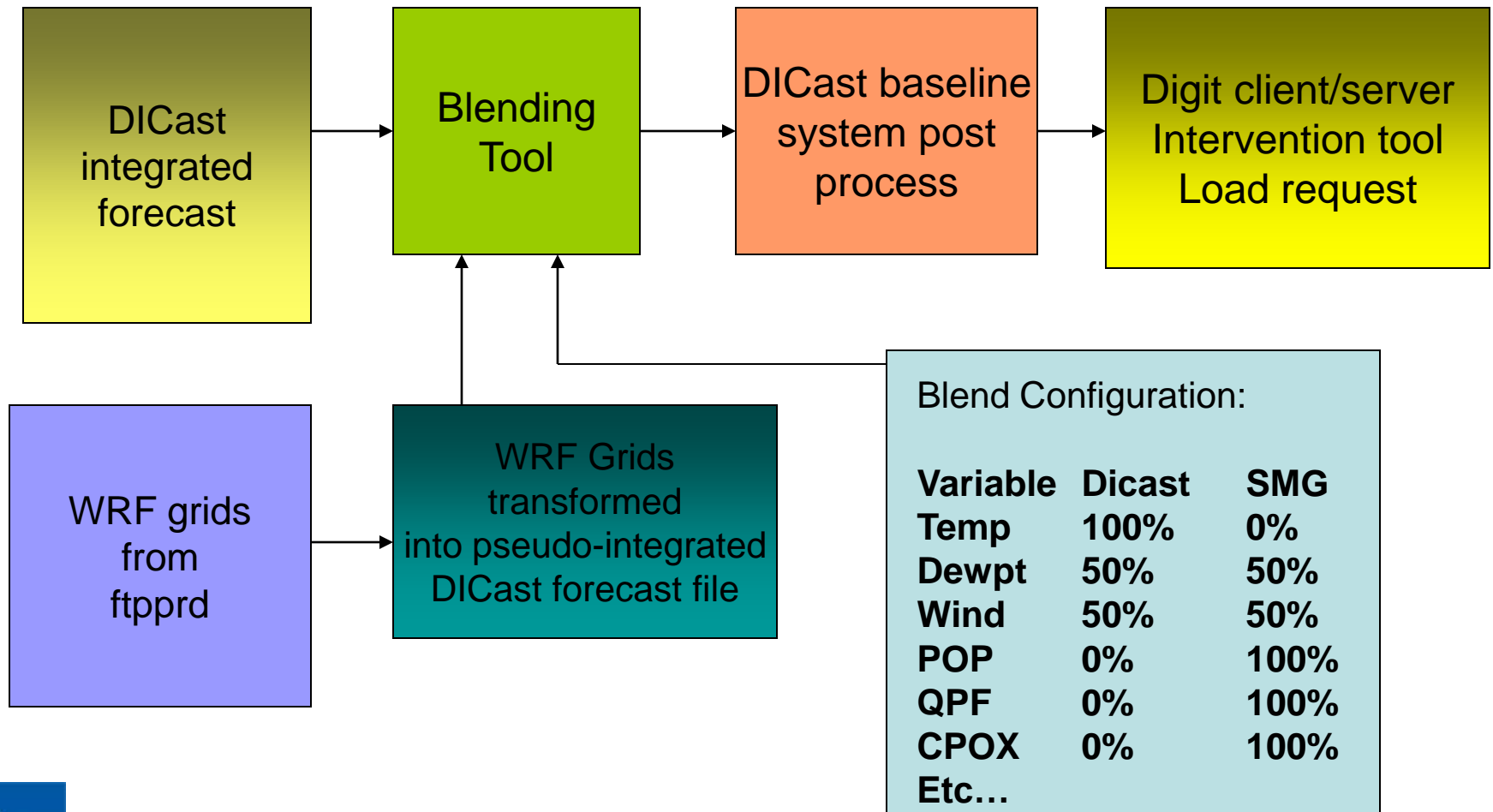




# DICast/SMG System Basics



# SMG system overview



# Example SMG Output

## Primary Field

File: /qatdicast01/DICAST/smg\_fcst/smg\_fcst.v00/20070810/smg\_fcst.v00.20070810.0400.nc

Created: Fri 10 Aug 2007 03:29 UTC

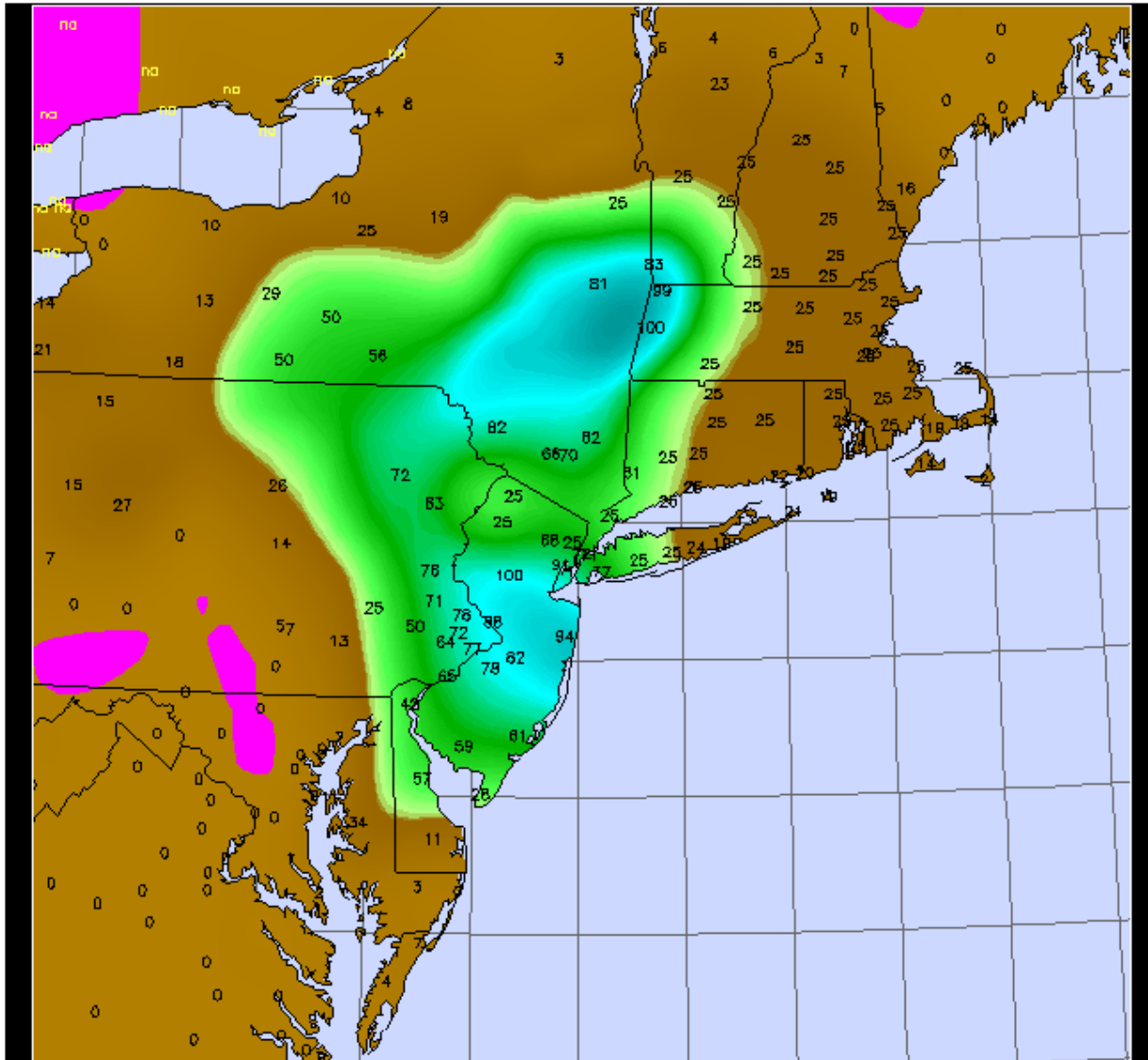
Parameter: prob\_precip06 Forecast UNKNOWN

Units: pct

Valid at: Fri 10 Aug 2007 15:00 UTC

Forecast Day: 01

Forecast Time: 1500 UTC





# SMG results

- SMG has been helpful mainly in cold season scenarios
  - Lake effect depiction improved over D1Cast
  - Shallow cold air events
  - Precipitation typing better than D1Cast in some cases
  - Our forecast center uses SMG less in summertime scenarios...convection solution is too deterministic in NAM-WRF



# SMG next steps

- Move towards SREF
  - SMG solution too sharp-edged
  - Too many false-alarms and misses
  - i.e. phase error
  - Forecasters do not utilize as much as they could.. There is also concern about WRF skill
  - Originally, SREF did not have the output fields or latency to support SMG.. But this is changing.



# Human-centric icons

- Evolution of Content and Product cultures here at TWC
  - 1982 – 1992 .. MET-Centric, labor intensive
  - 1992-1998 .. Some automation, Some artistic/consumer awareness
  - 1998 – 2003 .. Automation and Digital push (web)
  - 2003-Present ... Product-Centric, massively automated and Digital
  - More with less economics



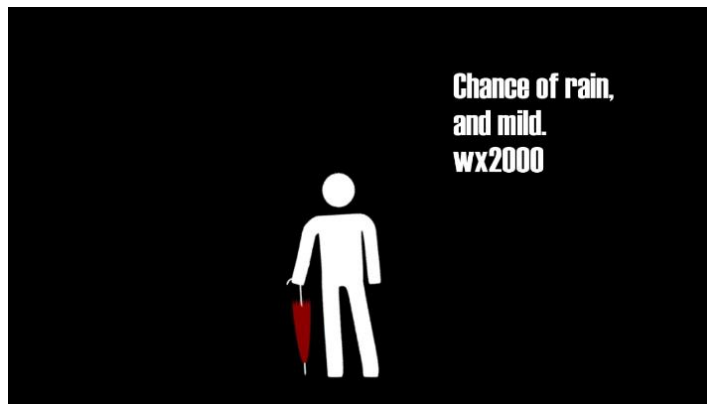


# Human-centric icons

- Normally Weather content drives possible products. i.e. what's possible with science and data circumscribes what's possible with products.
- In general, the seam or interface between product and content needs constant care and attention.. And this what we are focused on as of late.
- Here's an example of product-ideas or brainstorming driving content.

# Human-centric icons

- The first animation shows Wxman with an umbrella closed denoting a chance of rain..
- When the forecast rain chance exceeds 54% the animation changes to includes raindrops and an open umbrella.





# Summary

- Depicting forecast uncertainty or probability is very important.
- It is an especially difficult challenge with so many preexisting products and conventions in place that are deterministic.
- There is a slow learning curve in the direct to consumer space, else it comes across as extra noise
- The information must engage, be understood, and must add value