## CLAIMS

1. A system comprising:

one or more weather data source systems;

one or more market data source systems;

at least one user device associated with at least one user; and

a data distribution system in communication with the one or more weather data source systems, the one or more market data source systems and the at least one user device via at least one network, the data distribution system comprising an interactive graphical user interface (GUI) for interactively presenting integrated weather and market data, the data distribution system configured to:

collect weather data among the one or more weather data source systems,

collect financial market data among the one or more market data source systems,

store, in at least one database, a weather symbology comprising one or more symbol elements linked to segments of the collected weather data and one or more pre-defined rules for generating weather symbology instructions having a pre-defined instruction structure,

generate the interactive GUI for display on the at least one user device,

receive a weather data request from the at least one user device via the interactive GUI,

determine a weather symbology instruction based on at least one requested symbol element indicated in the received weather data request and in accordance with the one or more pre-defined rules,

create at least one weather forecast dataset from among the collected weather data based on the weather symbology instruction,

generate a presentation package comprising the weather forecast dataset and a portion of the collected financial market data such that the weather forecast dataset is integrated with said portion of the collected financial market data,

present the presentation package on the interactive GUI, and

update the presentation package on the interactive GUI concurrent with changes to one or more of the weather data, the financial market data and user input via the at least one user device,

wherein the presentation package further includes an interactive presentation of one or more of at least one weather forecast map, at least one weather alpha region indicating a combination of weather forecast data and the collected financial market data, at least one weather perspective chart associated with a predetermined weather perspective workflow, at least one model status region, at least one watchlist region, at least one alerts region, at least one chart, at least one table, at least one weather grid, at least one analytic value and at least one user input window for customizing the interactive presentation.

2. The system of claim 1, wherein the one or more symbol elements are associated with at least one of at least one weather forecast model, at least one weather observation location and at least one predetermined weather workflow structure.

3. The system of claim 2, wherein the at least one predetermined weather workflow structure includes one or more of at least one weather alpha, a guidance perspective, a progression perspective and an accuracy perspective.

4. The system of claim 2, wherein the interactive GUI includes at least one wizard window for user-customization of the at least one predetermined weather workflow structure.

5. The system of claim 1, wherein the weather symbology further includes one or more weather variables comprising at least one of predetermined fields and predetermined conditions, the weather symbology instruction further determined based on at least one requested weather variable among the one or more weather variables received in the weather data request.

6. The system of claim 1, wherein the collected weather data includes weather observation data and weather forecast model data.

7. The system of claim 6, wherein the weather observation data includes at least one of Meteorological Aerodrome Report (METAR) data and Climate Forecast System Reanalysis (CFS-R) data.

8. The system of claim 6, wherein the weather forecast model data is associated with at least one of a Global Forecast System (GFS), a GFS ensemble (GFS ENS), a GFS ensemble Extension (GFS ENS EXT), a Climate Forecast System (CFS) ensemble, a European Center for Medium-Range Weather Forecast (ECMWF), a ECMWF ensemble (ECMWF ENS), a ECMWF ensemble Extension (EXCMWF ENS EXT), a ECMWF Seasonal (SEAS) and a ECMWF Seasonal Extension (SEAS EXT).

9. The system of claim 1, wherein the collected weather data and the collected financial market data includes at least one of streaming data and static data.

10. The system of claim 1, wherein the weather symbology instruction is included in the weather data request or the weather data request is converted to the weather symbology instruction.

11. The system of claim 1, wherein the data distribution system is configured to extract at least one segment among the segments of the collected weather data corresponding to the at least one requested symbol element in the weather symbology instruction.

12. The system of claim 1, wherein the weather forecast dataset includes at least one weather forecast stitched together from among the collected weather data in accordance with the weather symbology instruction.

13. The system of claim 1, wherein the interactive GUI is configured to display at least one weather map generated from among the collected weather data.

14. The system of claim 1, wherein the weather forecast dataset is generated as a function of an exchange time associated with the collected financial market data.

15. The system of claim 1, the system further configured to expose the presentation package to at least one application programming interface (API).

16. The system of claim 1, wherein the interactive GUI is configured to be launched in at least one of a trading desktop, a mobile application and a spreadsheet application.

17. A method, the method comprising:

providing a data distribution system in communication with one or more weather data source systems, one or more market data source systems and at least one user device via at least one network, the data distribution system comprising an interactive graphical user interface (GUI) for interactively presenting integrated weather and market data;

collecting, by the data distribution system, weather data among the one or more weather data source systems;

collecting, by the data distribution system, financial market data among the one or more market data source systems;

storing, in at least one database, a weather symbology comprising one or more symbol elements linked to segments of the collected weather data and one or more pre-defined rules for generating weather symbology instructions having a pre-defined instruction structure;

generating, by the data distribution system, the interactive GUI for display on the at least one user device;

receiving, via the interactive GUI, a weather data request from the at least one user device;

determining, by the data distribution system, a weather symbology instruction based on at least one requested symbol element indicated in the received weather data request and in accordance with the one or more pre-defined rules;

creating, by the data distribution system, at least one weather forecast dataset from among the collected weather data based on the weather symbology instruction;

generating, by the data distribution system, a presentation package comprising the weather forecast dataset and a portion of the collected financial market data such that the weather forecast dataset is integrated with said portion of the collected financial market data;

presenting the presentation package on the interactive GUI;

updating the presentation package on the interactive GUI concurrent with changes to one or more of the weather data, the financial market data and user input via the at least one user device; and

wherein the presentation package further includes an interactive presentation of one or more of at least one weather forecast map, at least one weather alpha region indicating a combination of weather forecast data and the collected financial market data, at least one weather perspective chart associated with a predetermined weather perspective workflow, at least one model status region, at least one watchlist region, at least one alerts region, at least one chart, at least one table, at least one weather grid, at least one analytic value and at least one user input window for customizing the interactive presentation.

18. The method of claim 17, wherein:

the one or more symbol elements are associated with at least one of at least one weather forecast model, at least one weather observation location and at least one predetermined weather workflow structure, and

the at least one predetermined weather workflow structure includes one or more of at least one weather alpha, a guidance perspective, a progression perspective and an accuracy perspective.

19. The method of claim 17, wherein the weather symbology further includes one or more weather variables comprising at least one of predetermined fields and predetermined conditions, the weather symbology instruction further determined based on at least one requested weather variable among the one or more weather variables received in the weather data request.

20. The method of claim 17, wherein the collected weather data includes weather observation data and weather forecast model data.

21. The method of claim 17, wherein the collected weather data and the collected financial market data include at least one of streaming data and static data.

22. The method of claim 17, the method further comprising:

generating the weather forecast dataset as a function of an exchange time associated with the collected financial market data.

23. The method of claim 17, the method further comprising:

exposing the presentation package to at least one application programming interface (API).

24. A system comprising:

one or more weather data source systems configured to generate one or more weather data streams;

one or more market data source systems configured to generate one or more financial market data streams; and

a data distribution system in communication with the one or more weather data source systems and the one or more market data source systems via at least one network, the data distribution system configured to:

store, in at least one database, a weather symbology comprising one or more pre-defined symbol elements linked to one or more segments of the one or more weather data streams,

receive the one or more weather data streams among the one or more weather data source systems via at least one data feed,

receive the one or more financial market data streams among the one or more market data source systems via the at least one data feed,

segment the received one or more weather data streams based on the one or more pre-defined symbol elements to form at least one segmented weather data stream,

receive a weather data request from at least one user device via the at least one network,

identify at least one symbol element among the one or pre-defined symbol elements indicated in the received weather data request,

extract one or more segments of at least one segmented weather data stream based on the at least one identified symbol element to form at least one extracted weather stream,

create a real-time weather dataset from the at least one extracted weather stream based on the weather data request,

generate an integrated presentation package comprising the real-time weather forecast dataset and the received one or more financial market data streams,

at least one of expose the integrated presentation package to at least one application programming interface (API) and present the integrated presentation package on a display of the at least one user device, and

update the integrated presentation package concurrent with changes to one or more of the one or more weather data streams and the one or more financial market data streams,

wherein the integrated presentation package further includes an interactive presentation of one or more of at least one weather forecast map, at least one weather alpha region indicating a combination of weather forecast data and financial market data, at least one weather perspective chart associated with a predetermined weather perspective workflow, at least one model status region, at least one watchlist region, at least one alerts region, at least one chart, at least one table, at least one weather grid, at least one analytic value and at least one user input window for customizing the interactive presentation.

25. The system of claim 24, wherein the weather symbology further includes one or more pre-defined rules for generating weather symbology instructions having a pre-defined instruction structure, the data distribution system configured to create a weather symbology instruction based on the at least one identified symbol elements in the weather data request in accordance with the one or more pre-defined rules, the real-time weather dataset being created based on the weather symbology instruction.

26. The system of claim 25, wherein the weather symbology further includes one or more weather variables comprising at least one of predetermined fields and predetermined conditions, the weather symbology instruction further determined based on at least one requested weather variable among the one or more weather variables received in the weather data request.

27. The system of claim 24, wherein:

the one or more pre-defined symbol elements are associated with at least one of at least one weather forecast model, at least one weather observation location and at least one predetermined weather workflow structure, and

the at least one predetermined weather workflow structure includes one or more of at least one weather alpha, a guidance perspective, a progression perspective and an accuracy perspective.

28. The system of claim 24, wherein the collected weather data includes weather observation data and weather forecast model data.

29. The system of claim 24, wherein the integrated presentation package is configured to be launched in at least one of a trading desktop, a mobile application and a spreadsheet application.