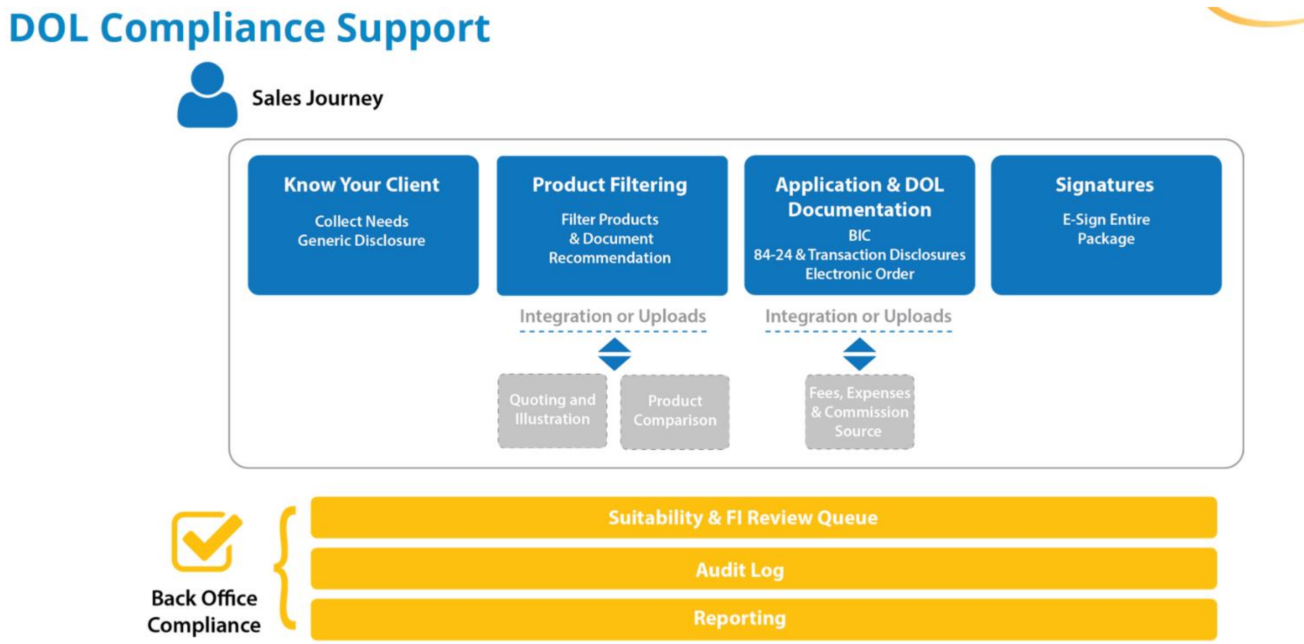
iConnect 147397
Product Filter Design Approach

Project Overview

DOL Filter capabilities from the Need Determination to the Application

This enhancement will support a filter for the available products to select in the application. The filter criteria is defined by the distribution for the products they support.



A new section in the groups tab will allow a group code to have rules and/or product filter categories defined for when to include a product in the available product options for the application selection. For example: Accumulation, Income, Protection, Death Benefit, and Protection of Capital can be questions asked in the Need Determination and based on the answers to these questions and others (financial profile, risk tolerance, time horizon for access to the funds), the list of available products will be filtered so that only the products that meet the rules are listed in the available product options for the application product selection.

If a client wants to prefill into FireLight the same values that would be needed to filter the product selection, FireLight will support the Filter without the FireLight Needs determination. When the group code has a filter rule set defined, whether the data items are collected in the Need Determination transaction in FireLight or sent in a prefilled SSO, the filter will be initiated.

Features/Requirements

1. Product Filter will leverage rules written in the Needs Determination transaction, the Product Category defined in the Admin and a query to define the filter.

2. Each financial institution will need to define their own product categories and rules to apply for the filter.
   - Because we have firms that have different distribution channels setup in FireLight, the rules will be written to apply to group roles.
   - Using the filter rules, FireLight will be able to use weightings and scorings to include or exclude products in the filter. For clients using the needs determination transaction, clients will need to define the rules, scoring, and weighting in the rules engine for the Needs Determination questionnaire. Upon launching into the Application, the rules will need to be evaluated and applied to further filter the product availability in the application product selection. The exact rules will need to be handled in a client WO but the ability to support it should be part of the PE.

3. After the user clicks the 'Apply' button from within the Needs Determination transaction, they will be brought to the Product Selection screen – this screen will use the defined filter rules in order to determine which products are shown to the user.

4. How the Filter will work:
   a. The product Filter will leverage rules written in the Needs Determination transaction to assign data points with the correct output/export value.
      - Example – rules written in the Needs Determination transaction could assign these values to the given data items, which would also be defined in the filter:
        - FLI_PLAN_TYPE = "Q"
        - FLI_STATEED_GOAL = "LI"
        - FLI_TIME_HORIZON = "6"

   b. The filter will then use a query to activate or eliminate products based on those rules.
      - Example – the following data items are defined in the filter to show "Product A" if the Needs Determination transaction contains matching data:
        - FLI_PLAN_TYPE = "Q"
        - FLI_STATEED_GOAL = "LI"
        - FLI_TIME_HORIZON = "6"
        - If the Needs Determination transaction contained matching data for the above items that have been defined in the filter, the correlating product (also defined in the filter) would be shown to the user in the Product Selection screen.

5. The list of products left after the filter has been applied will need to be recorded for audit purposes.

6. The new application will have Data Items assigned to indicate which products were shown to the user. There will be 2 data items per product shown, set up in the following format: "NeedsFilter_AvailableProductName_0", "NeedsFilter_AvailableProductCUSIP_0", "NeedsFilter_AvailableProductName_1", "NeedsFilter_AvailableProductCUSIP_1", etc. This will

allow the product options to appear in the audit trail and could be used to prefill an Agent Rationale form within the application.

7. There will be different types of filter rules – they will function as follows:
    - String – this means that if the Needs Determination transaction contains the given data item for the filter rule, and the data item's value matches what is defined for the filter rule, then the corresponding product is allowed to be shown (unless other filter rules prevent it from being shown).
    - String Override Filter – this means that if the Needs Determination transaction contains the given data item for the filter rule, and the data item's value matches what is defined for the filter rule, then the product must be shown, no matter how the other filter definitions match up.
    - Value Less Than X – if the Needs Determination transaction contains the given data item, and the data item's value is less than what is defined for the filter rule, then the corresponding product is allowed to be shown (unless other filter rules prevent it from being shown).
    - Value Greater Than X – if the Needs Determination transaction contains the given data item, and the data item's value is greater than what is defined for the filter rule, then the corresponding product is allowed to be shown (unless other filter rules prevent it from being shown).
    - Numeric Range – if the Needs Determination transaction contains the given data item, and the data item's value is between or equal to the numbers that are defined for the filter rule, then the corresponding product is allowed to be shown (unless other filter rules prevent it from being shown).
    - Value Contains String – if the Needs Determination transaction contains the given data item, and the data item's value contains the value that is defined at any point within the data item's value, the corresponding product is allowed to be shown (unless other filter rules prevent it from being shown).
    - Not Equal String – if the Needs Determination transaction contains the given data item, and the data item's value is not equal to what is defined, then the corresponding product is allowed to be shown (unless other filter rules prevent it from being shown).

8. The filter interface will be in the Admin tool on the Groups page – it will have its own tab on the Groups page called 'Needs Filter'. This tab will contain an Organization drop-down that will allow the user to select which Organization's products they wish to define filter definitions for. With an organization selected, they set up the filter definitions in an editable table, which will function as follows:
    - All filter definitions will contain a category name – these category names will be the columns across the grid. Category names will be unrestricted strings, but they must be unique.
    - There will be a 'New Category' button that will add new categories/columns to the table.
    - The first row of the table will be the 'Filter Type' items. Filter type items are only selected from a drop-down list, showing the different types of filter rules available, as are defined in the previous requirement/feature.
    - The second row will be the 'Data Item ID' for the given filter category. This will be an unrestricted string that contains the Data Item ID to be used for the filter rules defined in that column.
    - Subsequent rows can be generated by allowing the user to select a product from a drop-down – once the product is selected from the drop-down, it becomes a new row. These rows contain the

values that must match within the Needs Determination transaction in order to show the correlating product. Based on the Filter Type selected for the given column, these are the types of inputs allowed by the user:

- String – unrestricted. Semi-Colons will delimit the string, allowing multiple options for the given product.
- String Override Filter – unrestricted. Semi-Colons will delimit the string, allowing multiple options for the given product.
- Value Less Than X – user can only input numbers in a decimal format – ex: 10,000.34
- Value Greater than X – user can only input numbers – ex: 10,000.34
- Numeric Range, user must input only two numbers separated by a dash – ex: 10,000.34-800,000.67
- Value Contains String – Unrestricted.
- Not Equal String – Unrestricted. Semi-Colons will delimit the string, allowing multiple options for the given product.

- The products available to be defined are only those which the group has access to, as is defined in the 'Product Access' tab in the Groups page.
- If, for any given row, not all filter definition cells match to the data contained in the Needs Determination transaction, then that product should not be shown in product selection.
  - Exception – product is present for another row, and it passes all filter definition cells for that row, then the product will be shown (see requirements on this scenario below).
  - Exception – row contains "String Override Filter" type for one or more of its cells, and that cell passes with the data from the Needs Determination transaction (in which case, the product would get shown).
- Products may be present in more than one row. If any one row for a given product passes all filter definitions (on that row), then the product should be displayed.
- Rows and Columns must be allowed to be deleted.
- Any cells within the table that are left blank are considered intentional – meaning, if a given cell is left blank (and has a Filter Type of "String"), and on the Needs Determination transaction the corresponding data item is not left blank, the given filter definition will not be considered to match up.
- If cells are given a value of "NULL", then those cells are ignored in the filtering.
- All filter data must be saved for the given group when the user clicks the 'Save' button, unless any of the user's input does not match the required format for any of the cells within the table.

9. The Filter definitions can deploy to different environments, such as deploying from Staging to Production, for example.

10. There will be a button that allows for spreadsheets (that contain all the filter information) to be imported, on the Filter tab in the Admin tool.

11. If the amount of data is too large to render on the page (a table containing thousands to tens of thousands cells), then display message instead of table "Data set too large - unable to render table."

Out of Scope:

1. The Filter will not be capable of being evaluated prior to actually launching into the application because this will allow the filtered list of products to be available for prefill into a “Product Options” page.

2. New Product level definitions will be required for the carrier to define for all of their products:
    - Non-qualified and qualified money (both options can be selected indicating the product supports both Non-qualified and qualified money)
    - Fee Based Product or Commission Based Product (Only 1 option can be selected for a given product) (Out of Scope for Ph1)

3. Enable Remove Filter (Out of scope for Day 1)
    - Create a group setting to enable the ability to remove the product filter.
    - If used by an agent, a flag must be set in the audit trail that the filter was removed.
    - A data item must be added that indicates the filter was removed. This data item may be used to trigger heightened backend review.
4. Delayed 103 Usage (Out of scope for Day 1)
    - Ability for user to come into FireLight with a delayed 103 that would utilize the Filter (as in, the 103 would contain the Needs Determination data, the correlating Provider would map the 103 data to needed filter data items, and then the user would get into Product Selection, which would use the filter in order to determine which products to show).

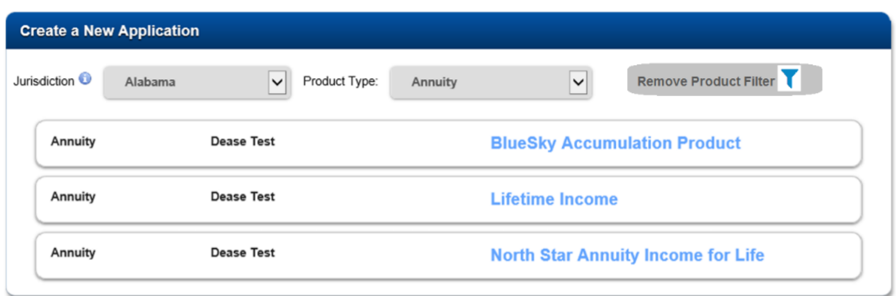


Figure 1: Remove Filter - Out of Scope

Use Cases / Workflow Changes

- FL Needs Determination Transaction captures questions that are stored as new data items. These data items will be defined into filter rules to apply to the available product selection in the eApp.
    - The definition of the product filter will need to be created in a client WO.
- Needs determination outside of FireLight is run. The SSO will contain the 103 xml, with which the Providers can set up data items that are defined in the filter.
    - The SSO linking to the filter will need to be created in a WO.
- Needs determination outside of FireLight, prefill directly into FireLight into the selected product.

1. Filter example that a client would provide in their WO for 1 FI: (Just an idea of how a client might define their filter.)

- Product A
  - Qual/non-Qual indicator supports Qualified
  - Commission product
  - Goal: Accumulation
    - Objective question: Lump Sum Access to funds
      - Time Horizon: greater than 10 years
- Product B
  - Qual/non-Qual indicator supports Qualified
  - Commission product
  - Objective question: Lifetime Income
    - Time Horizon: access to funds 0-5 years
- Product C
  - Qual/non-Qual indicator supports Qualified
  - Commission product
  - Objective question: Lifetime Income
    - Time Horizon: access to funds 6-9 years
  - Objective question: Lifetime Income
    - Time Horizon: access to funds greater than 10 years
- Product D
  - Qual/non-Qual indicator supports Qualified
  - Commission product
  - Objective question: Accumulation
    - Returns linked to Index
      - Time Horizon: access to funds greater than 10 years
- Product E
  - Qual/non-Qual indicator supports Qualified
  - Commission product
  - Objective: Protection of principal investment
    - Goal: Accumulation intent to pass to Beneficiaries

12. **Filter example that a client would provide in their WO for 1 FI: (Just an idea of how a client might define their filter.)**

- NO Products Available
  - Risk Tolerance: Potential for higher returns without guarantees – no products available
    or
  - Objective question: Accumulation
    - Time Horizon: less than 10 years – no products available
- Product A
  - Qual/non-Qual indicator supports Qualified
  - Commission product

- Risk Tolerance: No loss of principal
  - Objective question: Accumulation
    - Time Horizon: greater than 10 years

- Product B
  - Qual/non-Qual indicator supports Qualified
  - Commission product
  - Risk Tolerance: No loss of principal
    - Objective question: Lifetime Income
      - Time Horizon: access to funds 0-5 years
- Product C
  - Qual/non-Qual indicator supports Qualified
  - Commission product
  - Risk Tolerance: No loss of principal
    - Objective question: Lifetime Income
      - Guaranteed Steam with access to Accumulated Value
        - Time Horizon: access to funds 0-5 years
    - Objective question: Lifetime Income
      - Time Horizon: access to funds 6-9 years
    - Objective question: Lifetime Income
      - Time Horizon: access to funds greater than 10 years
- Product D
  - Qual/non-Qual indicator supports Qualified
  - Commission product
  - Risk Tolerance: No loss of principal
    - Objective question: Accumulation
      - Returns linked to Index
        - Lifetime Income stream with Accumulated Value access
        - Time Horizon: access to funds greater than 10 years
  - Risk Tolerance: Protection of principal investment
    - Objective question: Lifetime Income
      - Participating with Index with access to Accumulated Value
        - Time Horizon: access to funds less than 5 years
  - Risk Tolerance: Protection of principal investment
    - Objective question: Accumulation intent to pass to Beneficiaries
- Product E
  - Qual/non-Qual indicator supports Qualified
  - Fee Based Product

Admin Changes

1. Groups Page contains a new tab – "Needs Filter". Tab contains all Needs definitions for the selected group.

2. Needs Filter tab contains editable table that functions as is defined in the Features/Requirements section.

App Changes

1. The rules for the filter will need to be pulled from the group filter definitions to determine the list of available products to display for the Product Selection screen.

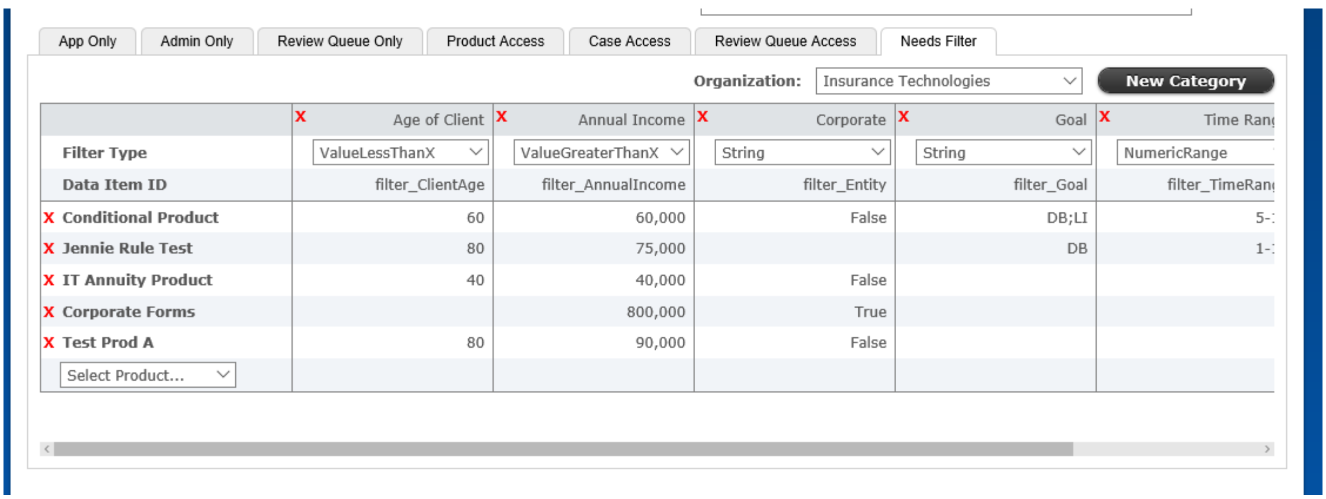
2. Audit trail of application will contain a list of products show to the user after being filtered.

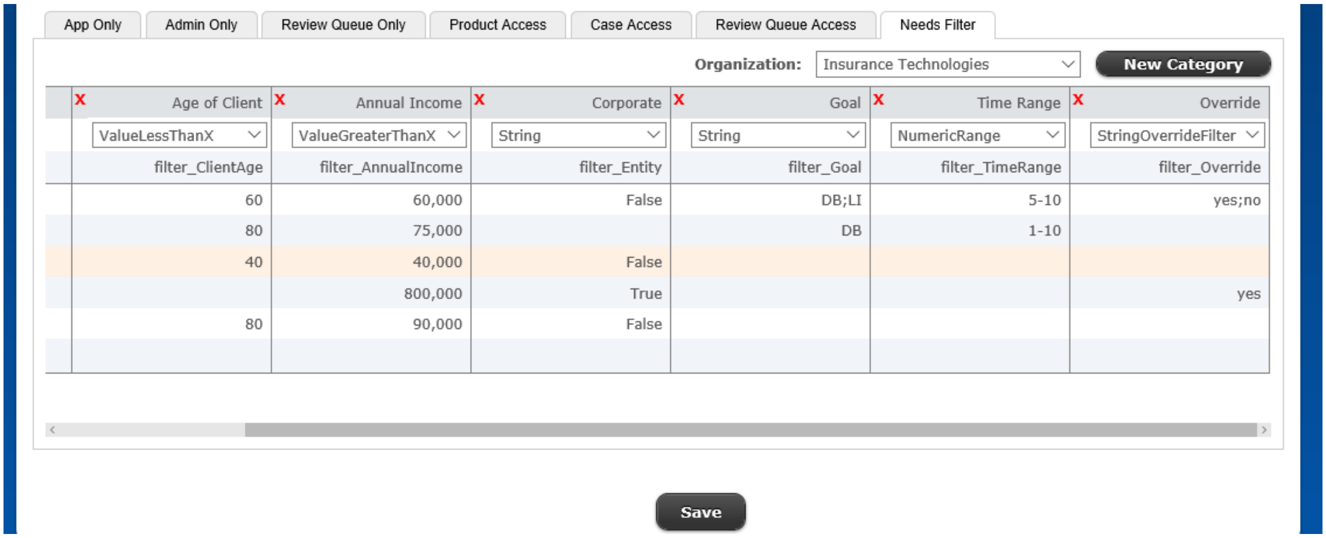
3. Application will contain new data items based on the list of products shown after being filtered: “NeedsFilter_AvailableProductName_0”, “NeedsFilter_AvailableProductCUSIP_0”, “NeedsFilter_AvailableProductName_1”, “NeedsFilter_AvailableProductCUSIP_1”, etc.

Integration Changes

- Input integrations
    - Prefill filter criteria using a 103 (to be completed with a WO since all client needs will be different)
    - New data items will need to be supported for the client data (objective, risk, goals, need)

UI Mock Ups





How to Enable and Use This Feature

1. A given user group must have the ‘Enable Create Needs Determination’ option selected in the ‘App Only’ tab of the Groups page.
2. The user group must have access to products.
3. Those products must have filter definitions set up in the ‘Needs Filter’ tab of the Groups page.
   a. Example A: Set up a single category, called ‘Test’. Give that category/column a filter type of ‘String’ and a data item of ‘filter_test’. Add a two products, and in the cells/rows for those products, type in ‘true’ in one, and ‘false’ in the other.
4. On the Needs Determination form, make sure the data items defined for the filter definitions are actually on the form.
   a. Example A, con’t: Set up a field on one of the Needs Determination forms, called ‘filter_test’ – make it a text field.
5. Fill out and submit a Needs Determination transaction, and click ‘Apply’ within the Needs Determination transaction afterward.
   a. Example A, con’t: Go in as a regular user, create a Needs Determination transaction, and type ‘true’ (or ‘false’, if you wish to see the other product). Submit the Needs Determination transaction, and then continue to the Product Selection screen.
6. The Products shown will be only the ones that match up to the filter criteria – if a given product’s filter definitions match up with the data that was input on the Needs Determination transaction, then that product will be available to the user to select.
   a. Example A, con’t: Based on what was input to the Needs Determination transaction in step 5a, you will see the corresponding product as was defined in step 3a.

Areas Impacted

System Area	Yes	Comment
Admin Tool		
- **Form Library**		

- **Design Forms**		
- **Profile Administration**	X	Groups Page
- **Reports**		
- **Deployment**	X	Group deployment should include filter definitions
FireLight App		
- **New Application**	X	Product Selection
- **Edit Application**	X	Audit
- **Signature Process**		
- **Review Queue**		
- **Manual Review**		
- **User Preferences**		
- **Inbound Integration**		
- **Outbound Integration**		
- **PDF Generation**		
- **Email System**		
FireLight Console		
- **Windows**		
- **iOS**		
Other Systems		
- **DTCC Integration**		
- **Commission Netting**		
- **Activity Reporting**		