

Exhibit G:
Annual Loan Products Narrative Reporting Template

FREDDIE MAC

AFFORDABLE HOUSING PRESERVATION

2018 REPORT

EVALUATION AREA: PRODUCT

ACTIVITY:

Activity 9 – Support Residential Economic Diversity: Additional Activity

OBJECTIVE:

Objective B: Create a mapping tool to enable deeper understanding of the various aspects of RED

ACTIONS:

In 2018, Freddie Mac achieved our goals under this objective by developing a national mapping tool to identify communities that promote Residential Economic Diversity (RED). We received first-hand feedback from several key stakeholders and are positioned for a broad public release in 2019. The completion (and eventual public release) of this tool, which we will be free to the public, will have a profound impact on understanding challenges and opportunities to financing affordable housing in these communities. Supporting RED, a method of promoting social and economic opportunity within a community, is a key priority for Freddie Mac. This tool advances our efforts considerably.

As part of our beta version, users can toggle between various aspects of each definition. This includes: DDA, QAP, and BOTH or R/ECAP or QCT. The development of this tool required advanced skills in coding and mapping to create a tool that is practical and beneficial for the user. This tool employs Google maps servers, with the geographies laid out above using shape files, so it is naturally familiar to users. The tool includes all of the capabilities included in our Plan. Users can search based on individual addresses or a batch of addresses in both “Satellite” or “Maps” formats, receive latitude and longitude coordinates and census tract information and export data relevant to their searches.

This enables developers, states and localities, and lenders to better understand these geographies and various properties that may qualify under DTS. We have heard from multiple developers that being able to visually identify map areas defined in QAPs will have a significant impact on their ability to create more affordable housing in areas of opportunity. This, combined with our OptigoSM network’s targeted support of these areas, will have a significant impact on deconcentrating poverty and promoting better life outcomes for lower income individuals.

This mapping tool is the first of its kind that can be used for these purposes. It will help many market participants to better identify and understand these geographies. It permits states and localities to be clear and intentional about categorizing areas that should be identified as promoting residential economic diversity. In addition, it permits states and localities to easily view such areas in other states or localities to better leverage successful programs in support of the areas. This, coupled with our national analysis of various definitions of opportunity and market size in these areas, will demonstrate for the first time the opportunities for scaled investment in real estate that promotes RED.

Plan Actions	2018 Actions
<i>Initiate Technology Project that will ultimately deliver an interactive mapping tool to identify FHFA defined areas of interest for RED, as well as:</i>	<i>We initiated a technology project with Freddie Mac development team to create the tool. We had weekly meetings throughout 2018 to ensure the tool was being created in line with our priorities on the business side as well as research side. The tool can be used to locate communities that promote residential economic diversity.</i>

<p><i>a. If the property meets regulatory agreements for housing subsidies or is market rate (note that we can only perform this service where the data exists, so we cannot likely capture and provide this information in all cases).</i></p> <p><i>b. Contact information for a Freddie Mac representative</i></p>	<p><i>We have obtained the necessary data to be able to identify properties that have certain regulatory agreements and will include in the public release of the tool. Additionally, though not explicitly stated in our Plan, we have included all DTS geographies within this mapping tool with all of the same features applicable to each region. This furthers the marketability of the DTS platform and our desire to support these underserved markets.</i></p> <p><i>We have included a contact link so users can reach out directly to our business teams with any questions related to our offerings that would work best in these communities.</i></p>
<p><i>How the tool will be used:</i></p> <p><i>a. The tool will be available to our network of seller/servicers who will be able to target localities that support RED</i></p> <p><i>b. Localities will more easily recognize locations that count as FHFA-identified high opportunity areas where Freddie Mac is seeking to provide financing, and can adjust their focus as appropriate.</i></p> <p><i>c. Freddie Mac will likely use the tool to locate properties that meet RED requirements and seek to provide financing for them.</i></p> <p><i>d. Tool will allow users to query by address or other geographic markers to be determined during development.</i></p>	<p><i>The tool can be used for numerous applications, including the uses identified in our Plan: Recognize locations that count as high opportunity; locate properties that meet RED requirements; and allows users to query by address or other geographic markers.</i></p> <p><i>We also included several uses that were not originally described in the plan:</i></p> <ol style="list-style-type: none"> <i>1. Toggling between various geographies to visually explore their boundaries,</i> <i>2. Exporting data relevant to multiple properties,</i> <i>3. Batch searching multiple properties,</i> <i>4. Searching through "Satellite" or "Map" format,</i> <i>5. Receiving latitude and longitude coordinates for properties,</i> <i>6. Receiving census tract information.</i> <p><i>This additional functionality expands its utility to all users.</i></p>
<p><i>a. Identify/Develop appropriate software for the tool</i></p> <p><i>b. Aggregate and align data for use in mapping tool from a selection of the following sources as well as others we may discover in our work: The National Housing Preservation Database, data.gov, HUD, Harvard's Equality of Opportunity Project, and Census Bureau information.</i></p> <p><i>c. Test the mapping tool in beta form prior to formal release.</i></p>	<p><i>We have leveraged data from ACS and FHFA to create the beta version of the tool and have gathered data from NHPD to be used in a 2019 public release. Through our development efforts, we determined that these are the most impactful datasets. Utilizing our licensing agreement already held with Google, we were able to create a platform to launch the tool. We have tested the tool internally and have shared the tool to a number of external organizations for Beta testing. Through the feedback we have received, we have determined the tool to be highly effective and plan to incorporate appropriate feedback in our public release in 2019.</i></p>
<p><i>Solicit Market Feedback from research and policy organizations, localities, borrowers, and Seller/Servicers</i></p>	<p><i>We have solicited feedback from external organizations who are representative of those most likely to use the tool extensively, including: National Housing Trust (Research & Policy), Housing Assistance Council (Research & Policy), Public and Affordable Housing Research Corporation (PAHRC) (Research & Policy), Greystone (Seller/Servicer), and Boston Financial (Syndicator). We plan to incorporate feedback in 2019 where appropriate.</i></p>
<p><i>Assemble a design team. Bring together the necessary individuals from IT, Research, and Business teams who will design and implement the product.</i></p>	<p><i>A team of over 10 individuals in research, production business, coding, data analytics, product management, and design helped create this product, which took more than a year to complete.</i></p>
<p><i>Reach out to external vendors to acquire or purchase the necessary data to build the platform.</i></p>	<p><i>We have acquired data from FHFA and ACS that has been built into the tool. We have also engaged the NHPD to negotiate terms to leverage their data relating to affordable housing subsidies on individual properties. This data will be uploaded into our tool in 2019 and will be included in our public release.</i></p>

<p><i>Identify Needs of Stakeholders</i></p> <p><i>a. Research and policy organizations b. Localities</i></p> <p><i>c. Borrowers</i></p> <p><i>d. Seller/Serviceers</i></p>	<p><i>In designing this tool, we identified the needs of key stakeholders based on our experience with each type of group as part of our business and research operations.</i></p> <ol style="list-style-type: none"> <i>1. Research and policy organizations need to be able to understand the DTS implications of properties and geographic areas, be able to upload properties for analysis, and extract underlying data for analysis</i> <i>2. Borrowers need to understand where QAPs incentivize development, so they can pursue sites in those areas</i> <i>3. Lenders and syndicators need to be able to test property addresses individually or in bulk to understand whether deal opportunities they bring to Freddie Mac qualify for DTS credit</i> <i>4. Localities who are interested in promoting RED need to see where existing incentives, such as LIHTC QAPs, or DTS priorities are</i> <i>5. We will be able to direct our lenders to these areas so they may better pursue transactions that support RED</i> <p><i>Our tool meets these needs.</i></p>
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SELF-ASSESSMENT RATING OF PROGRESS:

Select the category that best describes progress on this objective for the year.

- Objective met
- Objective exceeded
- Objective partially completed:
 - 75-99% (substantial amount)
 - 50-74% (limited amount)
 - 25-49% (minimal amount)
 - 1-24% (less than a minimal amount)
- No milestones achieved

PARTIAL CREDIT JUSTIFICATION:

N/A

IMPACT:

Provide a self-assessment of the level of impact that actions under the objective have accomplished.

- 50 – Substantial Impact
- 40
- 30 – Meaningful Impact
- 20
- 10 – Minimal Impact
- 0 – No Impact

IMPACT EXPLANATION:

Answer the following questions.

1. How and to what extent were actions under this objective impactful in addressing underserved market needs or laying the foundation for future impact in addressing underserved market needs? (*Character limit: 3,000 characters, including spaces*)

Much academic research has been conducted that suggests that promoting economic diversity in neighborhoods leads to healthy and sustainable communities. In creating a tool that will identify the properties supporting and promoting RED, Freddie Mac is making it easier for lenders and developers to deliberately engage in RED activities. This product has a number of capabilities that will benefit users.

The tool will impact the market by enabling:

- *investors to understand what properties meet the requirements for RED, and whether the DTS definitions of high opportunity area and area of concentrated poverty unintentionally exclude areas that may promote economic diversity;*
- *researchers to better study the distribution of properties and investment in these areas;*
- *policy makers and localities to learn from each other's efforts and make well-considered decisions about how to best promote RED;*
- *our Optigo lender network to deliberately target properties that support RED in these areas; and*
- *states who value RED in their QAP but do not have their high opportunity areas mapped to leverage our mapping service; over time we envision using this tool to map all high opportunity areas prioritized by states in their QAP.*

Additionally, prior to the creation of this tool, we had to geocode all addresses that we wanted to track against DTS and test property census tracts against DTS definitions. This was a lengthy process that our tool greatly reduces in both time and costs – geocoding with external sources typically costs approximately 25 cents per 100 geocodes, a costly process if thousands of addresses are being geocoded throughout the year. Our tool is free and will be available to the public in 2019.

Our mapping tool will establish an important foundation to decrease barriers to public policy decision making and development and financing decisions and allow for the better focusing of private capital for the purpose of promoting RED. This tool will likely uncover new market opportunities and enable us to better support them going forward through deliberate action from our Optigo lenders. The uniqueness of the tool, as well as its ease and versatility of use in supporting future development and lending in these areas, demonstrates substantial impact to the market.

2. Optional: How do actions under this objective support future actions detailed in the Plan for the underserved market? If there have been any changes in the planned next steps or timeline for work under or related to this objective, describe the changes and provide a brief explanation. (*Character limit: 1,500 characters, including spaces*)

This mapping tool will be useful for Freddie Mac's business platforms as we look to purchase loans on properties that support Residential Economic Diversity. Without this tool, it was extremely difficult for our lenders and producers to track deals that meet the qualifications and geographies. With the tool, identification becomes a much simpler exercise. As we continue to update the tool on an annual basis, we will look for ways to input property level data and include avenues for users to select a property and identify the most relevant Freddie Mac offerings.

This tool establishes a greater market understanding of RED and the primary challenges to creating and preserving affordable housing in these areas. As described above, this tool has several elements that make the tool more user-friendly than originally anticipated. With these new capabilities, Freddie Mac is better positioned to utilize existing offerings and implement new ideas that will help create lasting affordability for communities that promote residential economic diversity.

3. Optional: Are there any market factors that adversely impacted the actions under this objective? If so, describe. (*Character limit: 3,000 characters, including spaces*)

In the development of this tool, the primary challenge was a lack of accessible data pertaining to Residential Economic Diversity and housing in these areas. Current data on housing and RED is unconsolidated due, in part, to a lack of institutional investment and to the vast scope of this concept. As a result, the locations and characteristics of properties supporting RED are not clearly documented in a consolidated, accessible manner.

There was also very limited data pertaining to economic integration and mixed-income housing due to the novelty of the idea. Our research papers on Residential Economic Diversity go a long way towards remedying this issue, and this mapping tool can be used in combination with other research efforts to lay a foundation for greater understanding. An understanding of the geographies and demographics of these areas is a building block for greater research and understanding going forward.

In addition, in our review of state QAPs, we found numerous states include definitions of opportunity, but do not include a mapping feature for these areas. We intend to allow states to populate their data into our tool on an annual basis, making it easier for developers to locate properties that qualify under DTS. This bridges a considerable gap for FHFA's definition of high opportunity, since only 18 states were identified as meeting FHFA's qualifications per their QAP criteria of high opportunity.

4. Optional: How did the actions under this objective contribute to increased or future loan purchases for the underserved market? (Character limit: 1,500 characters, including spaces)

To measure Freddie Mac's ability to contribute to a market, we first need to understand the size and scope of that market. This tool contributes to the understanding of Residential Economic Diversity from a visual and practical standpoint. We can now inform our network of Optigo lenders of these markets and better direct them to properties in these areas by using the mapping tool.

Promoting housing in areas that support RED is dependent upon deliberate action from state and local governments, developers, investors, primary lenders and communities themselves. As a result of this tool, these parties are better equipped to undertake such efforts, but it is likely that more work, and more research, will need to be done before properties meeting FHFA's criteria are built and Freddie Mac can purchase loans on those properties. In combination with our two research papers on RED, we are now better suited to engage in purchases of properties that meet FHFA's criteria. Ultimately, this tool will enable a secondary market to be efficiently grown to scale for communities that promote residential economic diversity over time with deliberate action from market participants.

Attach the information detailed in the list of documentation specific to the objective that was provided by FHFA.

Exhibit C:

Second Quarter Loan Products Narrative Reporting Template

FREDDIE MAC

AFFORDABLE HOUSING PRESERVATION

2Q REPORT

EVALUATION AREA: PRODUCT

ACTIVITY:

Activity 9 – Support Residential Economic Diversity: Additional Activity

OBJECTIVE:

Objective B: Create a mapping tool to enable deeper understanding of the various aspects of RED

Supporting Residential Economic Diversity is an important priority for Freddie Mac. In order to do so broadly, it is important to build industry understanding of the market as it is defined by Duty to Serve. A mapping service advances this effort considerably. Throughout the first two quarters of 2018, we have begun creation of a national mapping tool which will identify high opportunity areas and areas of concentrated poverty as they relate to Residential Economic Diversity. We have determined the appropriate software platform necessary for the tool, collected relevant data, and have begun coding to create the tool. Upon completion, the tool will allow developers, states and localities, and lenders to better understand the precedents, opportunities, and challenges to promoting Residential Economic Diversity. As a result of these efforts, we are on track to complete this objective.

ACTIONS:

Action Category	Action Reference – Activity 9; Objective B	Status
Product Creation Actions	Action 1A-B	Initiate Technology Project – Complete
	Action 2A-D	Identify Uses of Tool – Complete
	Action 3A-C	Identify Software and Data – In process
	Action 4	Solicit Market Feedback from research and policy organizations, localities, borrowers, and Seller/Serviceers – Outstanding
Resource Actions	Action 1	Assemble a Design Team – Complete

	Action 2	Acquire or Purchase Data required for the tool – Complete
	Action 3A-D	Identify Needs of Stakeholders – Complete

SELF-ASSESSMENT RATING OF PROGRESS:

Select the category that best describes progress on this objective for the reporting period.

- On-target to meet or exceed the objective
- Progress delayed and/or partial completion of the objective expected
- Unlikely to achieve any milestones of the objective

ADDITIONAL INFORMATION (IF APPLICABLE):

N/A

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