The Development Approvals Index: A New Tool to Evaluate Local Approvals Processes

C. Kat Grimsley, PhD *cantab*
George Mason University

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NAIOP RESEARCH FOUNDATION

About NAIOP

NAIOP, the Commercial Real Estate Development Association, is the leading organization for developers, owners and related professionals in office, industrial, retail and mixed-use real estate. NAIOP comprises some 20,000 members in North America. NAIOP advances responsible commercial real estate development and advocates for effective public policy. For more information, visit naiop.org.

The NAIOP Research Foundation was established in 2000 as a 501(c)(3) organization to support the work of individuals and organizations engaged in real estate development, investment and operations. The Foundation's core purpose is to provide information about how real properties, especially office, industrial and mixed-use properties, impact and benefit communities throughout North America. The initial funding for the Research Foundation was underwritten by NAIOP and its Founding Governors with an endowment established to support future research. For more information, visit naiop.org/research.

About the Author

C. Kat Grimsley, PhD, is the Director of the Master of Science in Real Estate Development (MRED) program at George Mason University in Fairfax, Virginia. She is responsible for all aspects of the program including faculty, staff, student and curriculum management. Grimsley also supports the commercial real estate industry through outreach and special research projects as associate director of the Center for Real Estate Entrepreneurship (CREE). Currently, she also serves as an advisory board member and vice-chair of the United Nations Economic Commission for Europe's Real Estate Markets Advisory Group under the Committee of Urban Development, Housing and Land Management.

Prior to joining George Mason University, Grimsley managed an international property development portfolio for the U.S. Department of State, where she devised acquisition strategies for diplomatic properties in more than 25 countries and represented the U.S. government in the implementation of each. Grimsley also has private sector experience conducting market research, financial modeling and site analysis for local and national client portfolios.

Grimsley holds a BS in Finance (hons; specialization in real estate analysis) from the University of Illinois at Urbana-Champaign, an MS in Real Estate from Johns Hopkins University and a PhD in Land Economics from the University of Cambridge in England.

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Acknowledgements

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Disclaimer

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Executive Summary

Obtaining permits and entitlements is a critical step in the development process for any new project. Applying for development approvals often requires a substantial investment of time, effort and money, and the process can present significant risks. Fees, delays in the approvals process and required changes in a project's design or construction can increase a project's cost, reduce return on investment, or force a developer to reconsider their plans.

In addition to these risks, the approvals process can be complex, and at times opaque, for real estate developers. Requirements and processes vary between localities, and they can vary between projects in the same jurisdiction. Jurisdictions that have slower, less consistent and less predictable processes impose higher costs on projects and can stymie local economic growth by diverting new development to neighboring communities. Limited or inaccurate information about local processes may deter developers from investing in new projects outside of jurisdictions with which they are already familiar.

The NAIOP Research Foundation commissioned the creation of an index that allows commercial real estate professionals to compare development-approvals processes in different jurisdictions. The index allows developers to make more informed decisions and helps local governments benchmark their processes against neighboring jurisdictions. This report provides a description of the research behind the creation of the Development Approvals Index, outlines how to use the index and explores its potential applications and benefits for developers and local jurisdictions. The author researched existing methods for evaluating development approvals, examined local approval processes, and interviewed NAIOP chapter executives and individual developers to create an index that is suitable for the commercial real estate development community.

A copy of the spreadsheet that contains the Development Approvals Index is available online. Readers interested in using the index to collect and share information about jurisdictions' development approvals processes can find an overview of how to use the index in the Use and Application section of the report.

Introduction

In many jurisdictions, the approval process for commercial real estate development is lengthy and inefficient. This can introduce considerable project risk. Yet despite having a widespread impact across the development industry, there is currently no systematic way to evaluate and compare approvals processes in different jurisdictions. To address this issue, the NAIOP Research Foundation sponsored this study to explore the feasibility of creating a Development Approvals Index ("the index").

Within the broader spectrum of development approvals, the index specifically focuses on building plan reviews, permitting and inspections. Although perhaps less complex than zoning approvals, opaque plan review processes and delayed response times can also jeopardize projects. For example, developers can incur significant and unexpected increases in project timelines and costs as they try to reconcile conflicting feedback from different departments or at different stages of the review process.

This index seeks to provide a standardized and objective method to score jurisdictions and compare them across several performance metrics. In so doing, the index aims to inspire the evolution of approvals processes in three key ways. First, it is an industry resource that measures and quickly compares jurisdictions across key metrics. Among other uses, this allows developers to make more fully informed decisions about expanding into new markets. Second, jurisdictions can use index results as an objective benchmark to track improvements to their processes. Third, the index empowers developers, economic development authorities and other groups to advocate for best practices in their local jurisdictions. Table 1 provides examples of some potential benefits of the index.

This report outlines how the index was created, presents observations about its initial use, and offers suggestions for further research. The completion of this study represents the first step in a larger process to deploy the index more broadly as a resource for the commercial real estate development industry. NAIOP members can play a leading role in the adoption of the index and can help guide its future use and development.

TABLE 1 **Example Index Benefits**

Benefit Type	Benefit Description
Developer resource	• Improves transparency surrounding approval issues and processes for developers. • Provides a snapshot comparison of different jurisdictions to help developers evaluate opportunities when considering expansion into new markets or states. • Serves as a tool for smaller or resource-constrained developers.
Jurisdictional resource	• Allows jurisdictions to benchmark their performance against their peers in order to measure competitiveness. • Provides a mechanism for jurisdictions to measure improvements in their processes (as their score changes).
Advocacy	• Empowers developers, commercial real estate professionals and others to advocate for best practices in their local jurisdictions. • Serves as a tool for economic development authorities to work with jurisdictions to improve growth.

Index Development

The creation of the index involved a mixed-method multiphased methodology focused on compiling a multivariate data set that allows for repeatable results across regions and jurisdictions. The project consisted of four research phases: (1) desk research and initial component mapping; (2) interviews with local NAIOP chapters and members; (3) index development; and (4) testing and refining. Table 2 shows the timing of each phase.

TABLE 2 **Project Research Phases**

Phase 1: Initial Design (desk research and component mapping)	Spring 2019 – Fall 2019
Phase 2: Incorporating Developer Feedback (chapter outreach interviews and feedback)	Winter 2019 – Spring 2020
Phase 3: Index Development	Spring 2020 – Summer 2020
Phase 4: Testing and Refining	Fall 2020

Project Goals

Establishing clear goals is a critical initial step in any project's design. Three goals were particularly important for creating an index to measure approval processes: determining the index's focus, ensuring a user-friendly product and maintaining objective results.

There are several important factors that a development index can measure, such as timing of approvals; types and effectiveness of municipal growth policies; developer satisfaction with approval results; or level of procedural sophistication. Each of these, and an abundance of other possibilities, have implications for developers and the creation of the built environment. Determining the specific area of focus for an index guides the selection of input variables and its construction, so clarity on the focus of the index was paramount. For purposes of this index, time, cost, predictability and their relationship with project risk were determined to be the priority interests of the developer community.

Within the context of a focus on time and cost, ease of use was another critical project goal. The index had to be deployable without requiring significant research or resource support. In other words, it needed to be easy for individuals to use while still serving as a practical tool with a range of applications. Thus, input variables needed to contribute legitimately to index results while allowing individual users to collect and record data quickly and in a straightforward manner. Further, to keep results comparable across different jurisdictions and to ensure consistency between different users, the index needed to rely on data inputs available from official, publicly available sources, such as a planning and zoning department's website.

Objectivity was another critical factor in variable selection. Wherever possible, the index focuses on factual inputs to limit subjective interpretation and produce data-driven results. This is particularly important to preserve the integrity of index results and ensure they are not skewed by developer, jurisdictional or other perspectives. The index was designed to limit the introduction of biases and dependency on user analysis.

To highlight this point, consider the example of a hypothetical input for "responsiveness." The speed and accuracy with which a jurisdiction responds to developer inquiries (responsiveness) is arguably an important factor during any submission or approval. However, as an index variable, "responsiveness" is highly subjective. A range of factors may affect measured performance at any given time or during any given interaction. The explanatory value of any metric measuring responsiveness would need to be evaluated through an extensive campaign involving repeated calls/emails/interactions at different times of the day across several days or months and accounting for different staffing conditions. In other words, the methodology would need to ensure that the isolated experience of one person responding (or not responding) on a particular day or for a particular project would not materially affect a jurisdiction's responsiveness rating. For these reasons, the index does not seek to evaluate responsiveness or other variables that are difficult to measure.

In addition to choosing variables that would be easy to quantify, it was equally important for input variables to limit exposure to individual biases. For example, inputs and outcomes should not be dependent on jurisdictional participation, which introduces self-reporting bias (e.g., over-reporting responsiveness). Similarly, inputs must be insulated against confirmation bias and/or recall bias from users (e.g., under-reporting responsiveness) that might be due to their firm's size or capacity, previous experience or other factors.

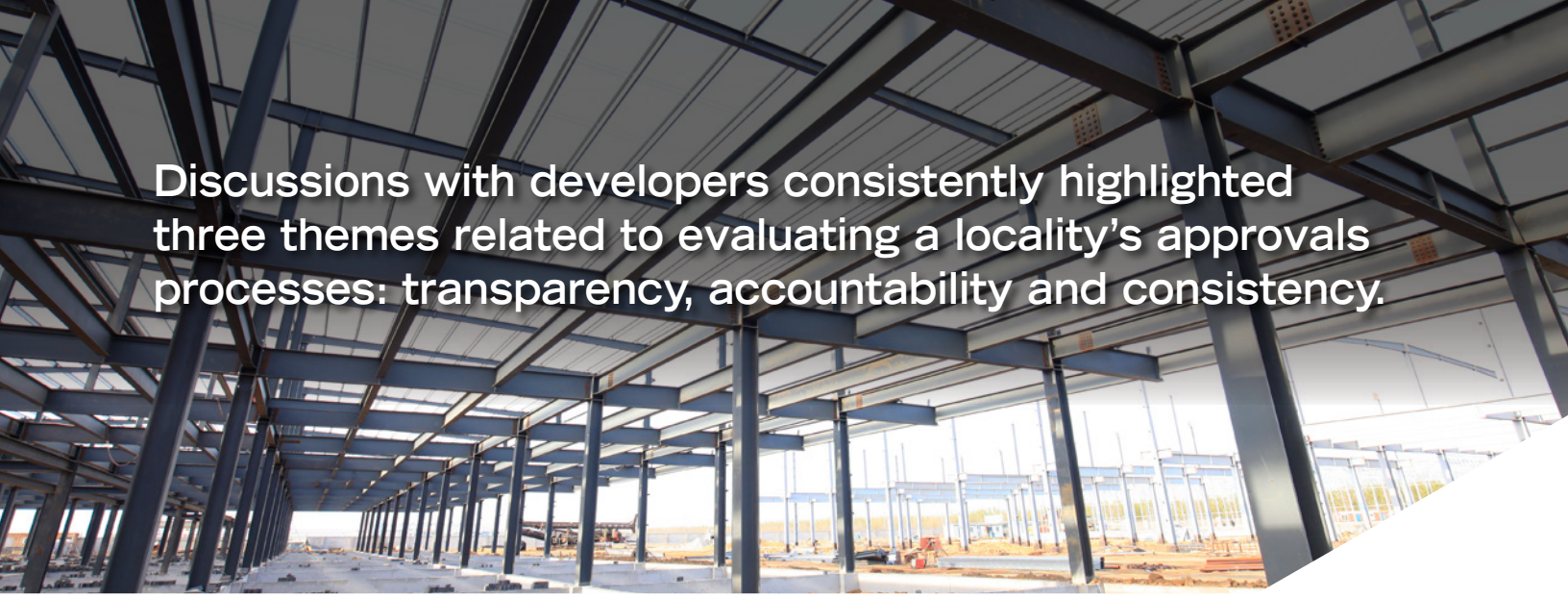
Meeting each of these goals impacted the design of the draft index in several ways. Importantly, determining which input variables should be selected for inclusion in the index took into account (1) the specific focus of the index; (2) the need for the index to be easily populated by NAIOP members using readily available information; and (3) the elimination of subjective variables or their replacement with objective proxies whenever possible.

Initial Design

The initial stage of the project focused on identifying and evaluating existing reports and indices related to either real estate or development to determine whether any relevant tools already existed. It also provided insight into potential methodological approaches and criticisms. Apart from tools created by local NAIOP chapters, such as NAIOP Utah's 2014 Municipal Development Report Card and NAIOP Vancouver's Regional Office Cost of Business Survey,[1] no similar current index was identified.[2]

After reviewing existing reports and indices, the author developed a comprehensive list of potential variables to include in the index. These included variables modified from different existing sources, as well as the inclusion of new variables. To ensure "tight" control of inputs, the index focuses on building permitting and inspections; zoning approvals were specifically excluded due to the highly variable nature of zoning approvals processes, underlying project issues and the variability of results. The first draft of the index featured input variables focused on direct measures of time and cost in the context of permitting and inspections, such as number and cost of required permits, maximum number of days (as permitted by regulation) needed to obtain approvals and fees (to be calculated).

After developing the list of suggested inputs, the author evaluated the availability of reliable sources of input data. An examination of the websites of test counties in Northern Virginia revealed that the necessary information was readily available and provided an initial validation of the input metrics, albeit in a limited test case. However, this examination also revealed that calculating an exact cost of fees, turnaround times and other measures would be problematic without a set of hypothetical building plans. Several existing indices use simplified sample scenarios to frame their input variables, so



Discussions with developers consistently highlighted three themes related to evaluating a locality's approvals processes: transparency, accountability and consistency.

precedent existed for this approach. The chosen sample scenario envisioned a mid-sized, by-right suburban office development. However, initial attempts at data collection based on the sample scenario revealed several limitations, including the need to potentially rely on jurisdictional input. Although it remained part of the index during the first phase, it was ultimately not used after the index design evolved following developer feedback.

Incorporating Developer Feedback

In the next stage of the project, the author collected empirical data from developers to verify the choice of variables included in the draft index and confirm alignment with industry concerns.

Coordinated outreach was critical not only to validate draft index components, but also to ensure that the results had value in real-world applications. A geographically diverse selection of NAIOP chapters were invited to participate in the outreach phase to avoid selection bias by ensuring appropriate inclusiveness and accounting for regional differences, as well as differences between urban and suburban markets. The NAIOP Colorado, Pittsburgh, Washington State and Utah chapters participated in this outreach phase.

Chapter executives recommended member developers who volunteered to provide feedback on the index. Five developers participated through extensive consultations with the author that included responses to standard questions and a review of the proposed index variables. The discussions also included "open forum" components during which developers provided descriptions of their local jurisdictions, processes and challenges. Generally, NAIOP chapters and individual developers expressed an understanding of the index goals as well as appreciation for the tool and its applications. The outreach concluded with an overall confirmation of the index concept, but also indicated that a structural revision would improve results.

Discussions with developers consistently highlighted three themes related to evaluating a locality's approvals processes: transparency, accountability and consistency. For example, developers noted that, while shorter review and response periods are preferable, certainty about the duration of the approvals process was more important, as unexpected delays can negatively affect project planning and budgeting. Accepting transparency, accountability and consistency as "pillars" that the index should reflect required a reconsideration of the initial draft design as well as several input variables.

Index Development

The pillars revealed during the outreach process are broad and conceptual in nature; as such, they are difficult to measure directly. Therefore, proxy inputs were added to the index to reflect performance across the three pillars. Table 3 shows examples of some inputs. For example, online permit tracking with detailed notes is an example of a measure for "transparency" because robust tracking systems provide developers with clarity and certainty regarding the status of their submissions. An input reflecting the option for third party review appears under "accountability," because it provides a way for a developer to achieve a necessary outcome, even if the jurisdiction cannot meet the obligation itself. Many of the metrics from the draft index were preserved under an appropriate pillar in the new format. The index also maintained its focus on factors that affect the cost, time and risk of a project.

TABLE 3 Example Inputs

Pillar 1: Transparency		
Input prompt:	Online permit tracking exists.	
Answer choices:	• Yes	(5 points)
	• No	(0 points)
	• Unknown	(0 points)
Input prompt:	Online permit tracking includes details/specifics about the permit/ review by various parties at all stages.	
Answer choices:	• Detailed tracking	(10 points)
	• Limited detail	(5 points)
	• No detail	(0 points)
	• Unknown	(0 points)
Pillar 2: Accountability		
Input prompt:	The developer/applicant has the option to elect peer review/third-party design review.	
Answer choices:	• Yes	(10 points)
	• No	(0 points)
	• Unknown	(0 points)
Pilar 3: Consistency		
Input prompt:	A case manager is assigned to each building permit application.	
Answer choices:	• Yes	(10 points)
	• No	(0 points)
	• Unknown	(0 points)

Restructuring the index to apply the three-pillar approach increased its flexibility by expanding the range of variables that could be accommodated under each theme. This expanded capacity represented an improvement over the original draft structure because it allowed for the capture of more nuanced elements than would have otherwise been possible. At the same time, the new model simplified data collection, since it did not require cost or time calculations based on a sample building plan and could be uniformly applied to evaluate approvals processes across different property types. The revised index maintained a focus on objective, quantifiable and relevant inputs that can be easily collected and compared.

Another update to the index structure was the addition of a points system to measure performance. This represented a change from the original design format, which required entering specific values such as the calculated cost of fees. Under the new format, each input is either treated as binary or measured on a simplified spectrum of performance. For binary inputs, a jurisdiction either accrues points or receives a null score. Each jurisdiction receives a cumulative score under each individual pillar as well as a total score.

Finally, to alleviate any potential concerns about perception of the results, jurisdictions are not assigned letter grades, which can be misconstrued and sometimes elicit strong reactions. Instead, municipalities receive numeric scores across different variables, which can then be compared.

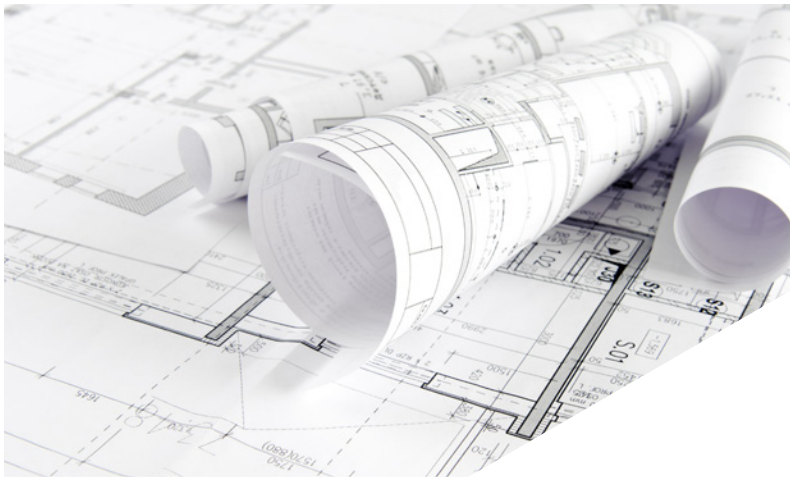
Testing and Refining

Once the revised index structure was finalized, the author tested the index to evaluate the appropriateness of the final input selection and the validity of output results. Jurisdictions in Georgia, Pennsylvania, Utah, Virginia and Washington State were selected for testing. Developers that had previously provided feedback on the draft index were asked to participate, along with additional NAIOP members from the Northern Virginia and Georgia chapters.

Prior to filling out the index for their local jurisdictions, respondents first participated in an orientation call in which the revised index was reviewed line by line to check the appropriateness of the final inputs against developer experience. Response was uniformly positive, with support for the chosen variables. Developers also provided feedback and suggestions to clarify or add variables in order to capture important nuances that the existing structure had not fully addressed. Developers or members of their team then populated the index for their local markets. In some cases, participants opted to complete the inputs for multiple jurisdictions in order to compare the output results with their professional experience.

Results of these "field tests" generally matched desk research results in terms of overall jurisdictional scores for major metropolitan areas. However, while the field and desk results were generally congruent, the testing process revealed a critical issue. Developer feedback indicated that the examination of multiple jurisdictions sometimes produced overall index scores that did not match developer experience. In other words, a jurisdiction known for an especially smooth approval process may have received a lower total score than a less efficient jurisdiction. This result was expected given that the input values (points) assigned previously were placeholders.

This project phase confirmed the functionality of the index, subject to the introduction of a weighting scheme to balance the influence of the different pillars on the resulting jurisdictional scores. The testing program also provided the opportunity to confirm that participants could easily use the index in the field. Overall, this input was instrumental in the evolution of the index.



Adjustments made in response to developer feedback were reviewed to ensure they were not shaped by individual biases about which localities should receive a higher score. To the contrary, developer feedback revealed a defensible need for modifications to the index. For example, due to the nature of the inputs, it was possible to assign a high score to a jurisdiction that was highly transparent about producing poor results and assign a lower score to a jurisdiction that consistently produced good results, regardless of its transparency. To address this, the point allocation for individual variables was adjusted and the overall scores for the three pillars were normalized. After this adjustment, jurisdictions could earn a maximum total of 120 points under each pillar. The value of each pillar was then weighted to reflect developer feedback that Accountability and Consistency are more important than Transparency in affecting approval outcomes, using the assigned weights below. The next section (Use and Application) provides a more detailed example of scoring.

Transparency = 25%
Accountability = 35%
Consistency = 40%

It is important to note that both field and desk research revealed that completing the index frequently requires entering "unknown" as the answer to a given question. This occurs primarily when the index asks the user for certain information that may not be widely available. Of the input variables, information regarding staffing and the total number of approvals/inspections that a jurisdiction completed were most commonly reported

Even when reporting “unknowns,” the index still achieves its goal by highlighting the absence of available information.

as “unknown.” Although jurisdictions less frequently provide information about these variables, they remain in the index because they are relevant to evaluating a jurisdiction’s performance. For example, a jurisdiction that conducts a large number of inspections with relatively few inspectors on staff is more efficient than one with a large staff that is unable to conduct inspections in a timely manner. These data, when available, allow jurisdictions to benchmark their performance and request or allocate resources accordingly. Thus, even when reporting “unknowns,” the index still achieves its goal by highlighting the absence of available information.

After adjusting input weights, the final index received supplemental input tabs to give users space for additional comments that may be relevant to their particular markets or jurisdictions. While this content is anticipated to be largely empirical, it may provide valuable insight into index results in a particular market and should be considered (as appropriate) as part of a holistic evaluation, particularly if different users provide similar comments.

With these final modifications in place, the project concluded and the index was ready for expanded use by interested chapters or individuals. Note that, as described in the Future Research section, additional modifications may eventually be made to the index after collecting more data and feedback through widespread use.

Use and Application

This section describes basic uses and an overview of input instructions for the index. It also includes a discussion of its broader applications.

Index Use and Instructions

The index is intended to facilitate the evolution of permitting approvals processes. Used prudently, the index can be a tool to facilitate productive, objective and respectful conversations among real estate professionals, local government employees, economic development authorities and other stakeholders.

Individuals or organizations can complete the index worksheets for a specific jurisdiction. Currently, the worksheet can compare up to five jurisdictions simultaneously. The index uses an Excel worksheet consisting of six separate tabs, five of which are input tabs and one that compares overall index scores for subject jurisdictions. Table 4 outlines the six tabs and their purposes.

TABLE 4 **Index Worksheet Tabs**

Tab	Purpose
User Profile	User identifies their role within the industry and the last interaction with the jurisdiction; this is for informational purposes and does not figure in the calculation of index results.
Transparency Pillar (data input)	User enters information in response to specific queries related to the jurisdiction's processes. Inputs require either a binary yes-no response or require that a number to be entered, such as a number of days. Input data is translated by the worksheet into points that factor into the jurisdiction's score.
Consistency Pillar (data input)	
Accountability Pillar (data input)	
User Comments	User has the opportunity to provide empirical comments on strengths, weaknesses and other factors related to the jurisdiction; this is for informational purposes and does not figure in the calculation of index results.
Overall Scores and Rank (output)	The index aggregates points from the input tabs and produces an overall score for each jurisdiction; there is no user input on this tab.

Each of the three pillar input tabs (Transparency, Accountability, and Consistency) is divided into five subsections. This subdivision helps collect input data around related themes, such as online services or timeframes, and helps guide the user through detailed inputs. Users enter their responses to the queries, and points are assigned accordingly. The spreadsheet itself provides specific instructions for populating the index input worksheets, but Table 5 (on the next page) shows a sample of an input section related to online services for demonstration purposes. Notice that items "c" and "d" are designed to clarify the quality of online permit tracking services. In other words, simply having permit tracking (c) is only of limited use if the system is very basic or not kept up to date. In order to earn full points, a system must exist (c) and also provide detail to the developer (d). Using this example, a jurisdiction that has a detailed online tracking system would score higher than one with only limited tracking or no tracking system at all.

TABLE 5 Example Input Subsection

Pillar: Transparency

Section 5. Online services:	Enter answer:	Points earned:
a. Online site plan submissions are accepted. (choose Yes or No) – 5 points	Yes	5
b. Online building plan submissions are accepted. (choose Yes or No) – 5 points	Yes	5
c. Online permit tracking exists. (choose Yes or No) – 5 points *– if Yes, enter a response to d and e* *– if No or Unknown, skip d and continue to e*	Yes	5
d. Online permit tracking includes details/specifics about the permit/review by various parties at all stages. (choices: Detailed tracking; Limited detail; No detail) – up to 10 points	Detailed Tracking	10
e. Inspections can be scheduled online. (choose Yes or No) – 5 points	Yes	5

The index spreadsheet provides a total point score for each jurisdiction under each pillar. The total pillar scores are then weighted and combined to arrive at an overall score, as demonstrated in Table 6. Note that users should only input verified information from publicly available sources, such as a permit-tracking portal from a department of planning and zoning. Using official sources whenever possible helps maintain consistency between users and across jurisdictions, which is critical for producing valid results.

TABLE 6 Sample Results

	Pillar 1 **Transparency** Raw score	Pillar 2 **Accountability** Raw score	Pillar 3 **Consistency** Raw score	**Weighted Overall Score**	**Rank**
County A	120	100	110	109	1
City B	100	105	80	94	2
City C	80	90	85	86	3
	Weight: 25%	Weight: 35%	Weight: 40%		

Applications

The index's potential applications are perhaps most apparent for developers. The index can support data-driven decision-making, particularly for developers evaluating opportunities for expanding into new markets or states, by providing a snapshot comparison of different jurisdictions. Index results may also empower developers to call for best practices in their local areas in cases where such conversations may be beneficial. However, other commercial real estate professionals, such as attorneys, contractors, engineers and architects, may also be interested in the index.

Similarly, jurisdictions can use the index to improve their processes. Departments or elected officials can use results to benchmark best practices, allocate resources, evaluate competitiveness with surrounding jurisdictions, or address other issues. The index can also serve as a tool for engaging coalitions of economic development authorities, local government entities, chambers of commerce, developers and other stakeholders to streamline the development approvals process and encourage economic growth. In this context, index results may be seen as making a positive contribution toward exploring solutions in challenging circumstances.

Beyond its immediate application to the commercial real estate development community and specific jurisdictions, the index might be of interest to national organizations such as the National Association of Development Organizations (NADO), a membership forum for 540 multijurisdictional regional planning and development organizations. Other organizations that may be interested in using the index include the National League of Cities (NLC), the U.S. Conference of Mayors (USCM), the National Association of Regional Councils (NARC) and the U.S. Economic Development Administration (EDA).

Future Research

The index is now ready for broader deployment. It was formally presented to NAIOP chapters in February 2021. Chapters are encouraged to further test the model and the NAIOP Research Foundation will track feedback and use.

Part of the responsible launch of any new initiative is to actively consider potential criticisms, unintended consequences and the need for additional research. The discussion below, while not exhaustive, reviews sample topics for consideration.

As with all new endeavors, the creation of the index requires continued monitoring and verification testing to proactively address and resolve any design concerns. Thus, the primary short-term consideration for future research is gathering data through increased index usage. While the current variables have been selected deliberately and verified through developer input, they should not be considered infallible. Continued use and review of the index may reveal the need to expand, substitute or modify existing variables as the index evolves through future iterations. Continued industry use and feedback will be important to keep the index up to date.

Currently, the index input worksheet requests users to self-identify; however, user identity is not an integral component of the index and is not factored into results. It may become interesting at a future time to review results based on who is getting the approvals or, for example, how they are distributed between different product types or firms of different sizes. Such a review would allow a later reconfirmation that outputs are independent of the user or, alternatively, reveal unexpected nuances in the results that require further study.

As designed, an underlying assumption of the index is that decisions promoting quality projects can be made quickly; however, it is possible that longer approvals processes in some jurisdictions could produce materially better results in approved projects. The index's current focus on building approvals and permitting precludes considerations of this type, but a future iteration could evaluate how processes effectively contribute to the built environment (e.g., sustainability, walkability, affordability, inclusiveness, placemaking, etc.).

Conclusion

Since its inception, the overarching goal of this project was to create a resource for the commercial real estate development community. Initial conversations with developers revealed a strong interest in the creation of a tool to evaluate jurisdictional approvals. Existing challenges with respect to approvals often have few remedies, and avenues for engaging in discussions are limited. An objective tool was needed to help frame productive, informed conversations around the approvals process. However, no such tool existed with national applicability and freedom from dependency on jurisdictional self-reporting or reliance on the need for substantial research support and analysis. The index fills this gap.

During the process of designing the index, developer feedback reflected a priority on reducing project risk associated with uncertainty in the approvals process. While the speed and cost of approvals are important, known time and cost constraints can be accounted for in a project timeline and budget so long as the outcome is predictable. Without this predictability, unexpected time and cost overruns can materially affect a project's viability. To address these concerns, the index was ultimately designed around the three "pillars" of Transparency, Consistency and Accountability, with distinct input variables captured under each pillar. Initial testing of the index confirmed the appropriateness of this structure.

While the purpose of this project was the creation of an approvals index rather than to draw conclusions about the underlying subject jurisdictions, it is possible to make some initial comparisons. For example, preliminary index results support the finding that material differences exist in approval processes between different regions as well as between urban and suburban jurisdictions. However, the small sample size used when testing the index limited these findings; additional observations are needed to confirm them.

The final index is now ready for expanded use. Developers and other real estate professionals can use it to compare conditions in different jurisdictions, identify potential risks and make more informed investment decisions. The commercial real estate development community can also use the index to facilitate data-driven conversations about approvals and pursue strategic partnerships to improve approvals practices.

Expanding the index to include an evaluation of variance or zoning approvals is also a future possibility. However, such an evolution would be complicated for a variety of reasons. On the developer side, it would require some method for evaluating the proposed project for complexity and appropriateness. On the public sector side, it would require the consideration of policy goals in addition to approval processes. For example, requiring variances for projects that might typically be approved by-right in other jurisdictions could be a strategy to force a higher level of scrutiny and increase control over development of the built environment. While potentially frustrating from the perspective of the private-sector developer, this can be a legitimate use of a public-sector policy tool, depending on results.

Various overlays may be interesting to add in future versions of the index. These could expand its application to issues beyond the scope of the current index. This might include economic overlays, comparisons with national construction starts, or rental/vacancy performance. Under its current design, the index does not include these elements, but a comparison of index scores to economic outcomes might reveal useful correlations. For example, if higher index scores are correlated to higher rates of economic growth or a larger supply of housing units, that might motivate a jurisdiction to improve its processes in order to increase the number of projects under construction.

Endnotes

[1] Note that in NAIOP Vancouver's Regional Office Cost of Business Survey, municipal responses are both voluntary and self-reported. See "21st Annual Regional Office Cost of Business Survey," NAIOP Vancouver, Fall 2020, https://naiopvcr.com/page/cobs_issues.

[2] An obvious limitation to this statement is that it is not possible to know what products may have been under simultaneous development or not widely published. Note that real estate investment fund indices were specifically excluded from this exercise as the evaluation goals of such instruments are inherently different than those of the index. Note also that other indices related to land use regulations exist, but are not designed as an interactive, user-enabled tool for the development community. For one such example focused on the residential market, see Joseph Gyourko, Albert Saiz and Anita A. Summers, "A New Measure of the Local Regulatory Environment for Housing Markets: The Wharton Residential Land Use Index," The Wharton School, University of Pennsylvania, 2006, http://realestate.wharton.upenn.edu/working-papers/a-new-measure-of-the-local-regulatory-environment-for-housing-markets-the-wharton-residential-land-use-regulatory-index/.

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For information about the Foundation's research, please contact Jennifer LeFurgy, PhD, vice president, Knowledge and Research, NAIOP at 703-904-7100, ext. 125, or lefurgy@naiop.org.

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2355 Dulles Corner Boulevard, Suite 750
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