

White Paper: 110

# The Holistic Approach to Real Estate Portfolio Management

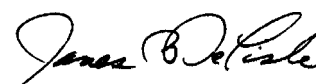
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by:  
James R. DeLisle, Ph.D. ©  
Runstad Professor of Real Estate  
Runstad Center for Real Estate Studies  
College of Architecture & Urban Design  
University of Washington

[jdelsle@u.washington.edu](mailto:jdelsle@u.washington.edu)

## Executive Summary

*During the 90s, the institutional real estate market underwent a number of changes, as investors struggled with the asset class in the aftermath of the worst industry-wide collapse in modern times. Although many positives came out of the renewed scrutiny and discipline wrought by the excesses of the 80s, the troubled times also triggered a reversal in some of the progress that had been made in the evolution of applied portfolio management theory. In particular, the depth of the market's decline and pervasive nature made it difficult to produce attractive risk-adjusted returns, regardless of the viability of any particular strategy. As we move into the new millennium and the bull real estate market that resulted from the almost complete withdrawal of capital flickers out, it is time to once again turn to prudent models of real estate investment management. This article is intended to present a framework that institutional investors can use to manage real estate portfolios. It summarizes the evolution of the first and second generation of applied portfolio management, covering both under the "Holistic" label. The article presents a framework that can be used to guide the construction of traditional core private portfolios diversified by property type and economic location. It then builds on this foundation to provide a conceptual model that can be used to enfold opportunistic, global, REIT, CMBS and other exotic investment structures in a comprehensive approach. Going forward, we believe that investors will benefit from asking some of the strategic questions raised by this model and by focusing on real estate fundamentals.*



James R. DeLisle, Ph.D.,  
Director

## Introduction

### Background

Pension funds demonstrated a renewed interest in real estate investments during the latter 90s due to a combination of improving real estate fundamentals and the desire to tap into the diversification benefits that real estate can add to a mixed asset portfolio. As investors returned to the asset class, they were being confronted with the Four Quadrant approach. In many circles, the Four Quadrant approach was touted as a revolutionary framework, a paradigm shift that could be used to guide how plan sponsors construct their real estate portfolios. In this article we introduce a “Holistic Model,” which provides an alternative framework that plan sponsors can use to manage real estate allocations in the context of their overall portfolios.

### The Four Quadrant Model

Before introducing a competing framework, it is useful to explore the pros and cons of the Four Quadrant approach from the perspective of a plan sponsor. On the positive side of the equation, interest in the Four Quadrant model can be attributed to a number of factors. First, the model has intuitive appeal, reducing the real estate asset class to distinct sectors. Second, the model is elegant in its simplicity, enabling investors to construct strategic real estate portfolios by merely setting allocations among the four quadrants. Third, the model increases the flexibility investors can use in managing real estate portfolios, enabling them to draw from an array of new products, structures, and vehicles. Fourth, since two of the four quadrants operate in the public arena, four quadrant investing appears to add greater liquidity than can be obtained within the asset class. Fifth, the model allows investors to approach real estate from at least a partially new perspective, devoid of the baggage of the past. Finally, a large number of service providers, both new and established real estate players,

have geared up to promote and service the three “new” quadrants: public equity, private debt, and public debt.

Despite the positive dimensions of the Four Quadrant model, the framework has a number of limitations for managing institutional portfolios. First, the model fails to address the asset allocation decision. Indeed, rather than supporting allocations among major asset classes at the portfolio level, the approach can set the real estate portfolio up for a potential conflict with the overall portfolio strategy. For example, a Four Quadrant real estate manager, attempting to maximize performance of the real estate portfolio, may go long or short on fixed income or equity-like components of real estate, tactically overweighting the portfolio. Second, the approach is difficult, if not impossible, to successfully implement in the fiduciary arena in which a plan sponsor must operate. This limitation stems from the absence of sufficient valid and reliable historical performance data to establish normative allocations across the full real estate investment spectrum. In addition to a shortage of performance data, the relatively immature public real estate and commercial mortgage markets suggest that historical performance cannot be validly extrapolated to the future. Thus, investors will not be able to understand the risks inherent in each sector and will only be able to guess as to the linkage between historical and future performance.

Our final issue with the Four Quadrant approach, and probably the most fundamental, stems from the apparent disconnect between the asset and spatial sides of the real estate market that it suggests. As presented to date, the approach implicitly answers the “asset class vs. industry sector” debate for real estate, with a resounding vote on the industry sector side of the equation. Thus, it turns attention away from real estate fundamentals (i.e., supply and demand modeling for space) and toward issues surrounding financial structure and investment positioning. Ironically, it was just such a disconnect in the mid-1980s that fueled the overconstruction of



commercial real estate and created the need for a new “paradigm” in the first place. In addition to skewing attention away from fundamental research, the model ignores the advances that have been made by applying portfolio management principles within the asset class. We believe that such a change would be an unnecessary and expensive regression for plan sponsors and for the asset class.

## The Asset Class Debate

One of the fundamental questions that plan sponsors must face in developing real estate policy statements centers around the “asset class” debate: whether real estate is a distinct asset class or an industry sector. While this issue has been argued in the past, it was never definitively resolved, effectively relegating it to a manner of semantics. From our perspective, the question is non-trivial, striking directly to the heart of how plan sponsors should address real estate. For example, under an asset class model, real estate allocations should be treated separately, guided by strategic, long-term allocations to real estate. Under the industry sector model, plan sponsors would not have to specifically address real estate allocations, but could leave real estate exposures up to their fixed income and equity managers. Thus, plan sponsors would not direct real estate portfolios, but would periodically have exposures when relative values indicated they offered attractive returns. To be considered an asset class, real estate must satisfy certain tests including:

- unique assets: distinct asset, market drivers, and performance characteristics not capable of being fit into the basic categories of equities, fixed income, or cash due to inherent differences associated with underlying assets;
- unique market mechanism: nature of market, price-setting, and underlying demand functions are unique; in the aggregate, the sectors within the asset class must exhibit some underlying

commonalities which affect performance and can be quantified;

- a meaningful grouping: the asset class must exhibit underlying product and market fundamentals which distinguish performance and are subject to prediction; and
- substantial in size and opportunities: comprised of a significant level of wealth; includes a number of investment opportunities for which the reward and/or risk reduction is associated with understanding the asset class.

Although real estate satisfies each of these four criteria, the unique nature of the market mechanism, (i.e., the inefficient market in which the vast majority of real estate assets are held), and the low correlations with other investments are the key variables that differentiate it from other asset classes. Under the four quadrant model, these two distinguishing characteristics become blurred. In particular, public equity and debt operate in a more efficient market and exhibit higher correlations with other asset classes (e.g., small cap stocks and treasuries, respectively) than does private real estate. Thus, under two of the sectors of the Four Quadrant model, real estate does not have to be treated as distinct allocation, but must compete with other investments. On the other hand, the level of private market real estate exposures would have to fit within the parameters set by the overall asset allocation study and must be managed with a careful eye to the underlying fundamentals of the asset class. Since the Four Quadrant approach does not address these fundamentals, an alternative framework is necessary. We believe that the “Holistic Model” presents a useful framework plan sponsors can use to manage both private and public debt and equity investments, while explicitly retaining a connection to the underlying fundamentals that distinguish real estate as an asset class.

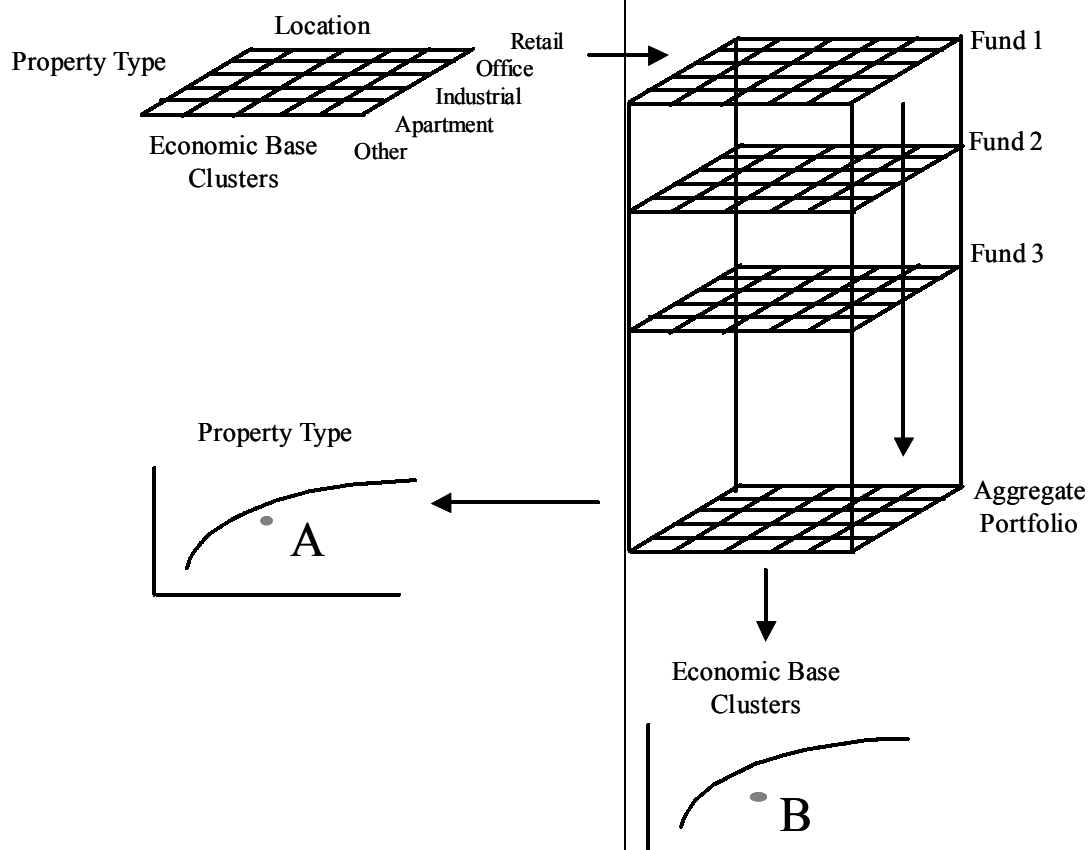
## First Generation Holistic Portfolio Management

Over the past 25 years, the role that real estate plays in pension fund portfolios has gone through several evolutionary stages. Until the latter-1980s, however, pension fund portfolios were generally confined to private equity investments, with limited debt exposures and only incidental public investments. During the mid-1980s, institutional investors began to look at how their various real estate investments fit together. We have labeled the approaches that emanated

during this period as “First Generation Holistic Portfolio Management.” Although this jargon was not widely discussed, those familiar with real estate portfolio planning practices will recognize its components.

The “First Generation” model can be characterized as the multi-manager portfolio management framework in which investors sought to understand the composition and diversification of their overall real estate exposures, aggregated across investment managers and products. Such analysis was conducted by combining individual property level investment exposures, and then analyzing the resultant pool of properties. Under the holistic framework, investors treated real estate

**Exhibit 1: First Generation Holistic Portfolio Management**



as a distinct asset class to which some top-down allocation had been made. Given this allocation, investors focused on understanding their real estate exposures on an intra-asset class basis.

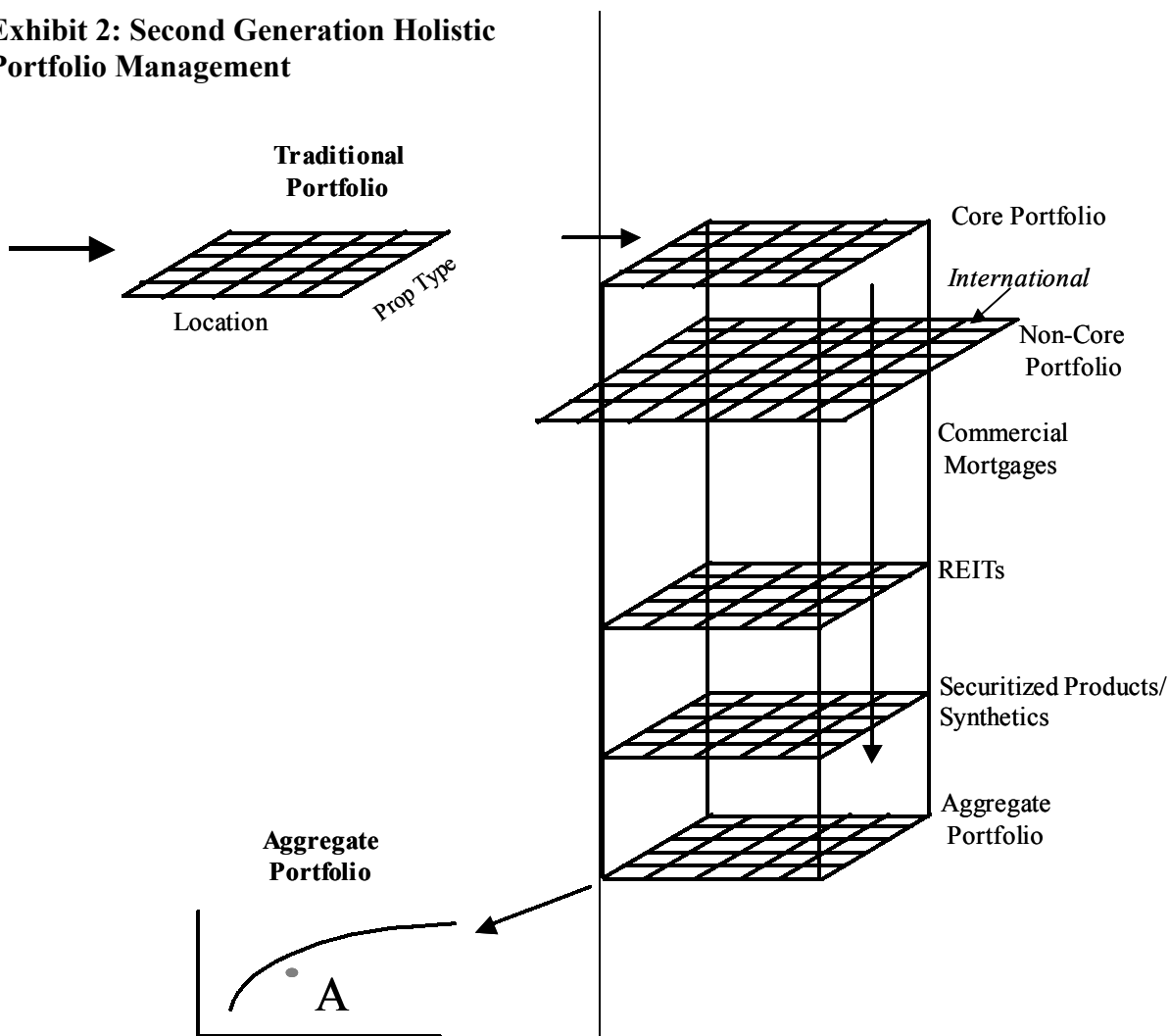
Once the aggregate multi-manager profiles of existing investments were established, plan sponsors could use a number of approaches to set diversifications ranging from the more esoteric optimization models contained in Modern Portfolio Theory (MPT), to simpler “market basket” allocations. In general, property type allocations focused on the major although an “other” category was sometimes formed to include specialty uses. With respect to locational diversification, regional diversification gave way to the notion of “economic location” in which markets were clustered on such bases as employment composition and employment growth

The final outcome of the First Generation Holistic Portfolio Management model was a systematic means of analyzing and managing real estate portfolios within the constraints of the asset allocation decision. Once aggregate portfolio exposures were established, the aggregate composition of an existing multi-manager, multi-product portfolio could be evaluated against normative ranges. Based on this foundation, plan sponsors could then target investments that would round out the exposures, much like a completion fund. In general, the normative portfolio allocations would be expressed in terms of long-term ranges, to address market timing issues, a viable concern in the lumpy, inefficient, and cyclical real estate asset class. Thus, rather than focusing on achieving some explicit diversification goals, investors could tactically overweight certain sectors, concentrating on specific market timing opportunities.

## Second Generation Holistic Portfolio Management

Despite the appeal and interest among plan sponsors in the First Generation framework, by the early 1990s the dramatic changes occurring in real estate capital markets made it somewhat myopic. To accommodate emerging investments and structures that plan sponsors had to address -- either explicitly or implicitly-- the basic framework was expanded. As noted in Exhibit 2, the “Second Generation” model accommodates the full spectrum of private and public debt and equity investments addressed in the Four Quadrant approach. The distinguishing feature between the two approaches is that the Holistic Model reflects a recognition that, in general, real estate is a distinct asset class with a unique market mechanism and a spatial dimension. It also recognizes that certain types of real estate exposures can be treated as sectors, with less emphasis on real estate fundamentals and more on capital markets. Like the four quadrant model, the Second Generation Holistic Model increases the level of aggregation at which the real estate portfolio is managed. Although some of the layers can be viewed largely as industry sectors (i.e., mortgages and CMBS can be treated as fixed income), the framework is set up to help plan sponsors recognize that each of them retains some real estate exposure. In effect, the traditional private equity portfolio becomes the core layer upon which other private and public layers are added. Although the model may appear to be overly complicated for investors who focus on any of the individual layers, we believe that the broader perspective is critical. Due to the immaturity of the public layers, the private market foundation provides a key benchmark against which risk-return trade-offs can be based. For example, in the case of commercial mortgages, the high correlations between NCREIF value changes by property type and ACLI delinquency rates, and the correlations between the severity of losses in actual foreclosures with the magnitude of

**Exhibit 2: Second Generation Holistic Portfolio Management**



property value declines, reveal the linkages between the two potentially independent slices.

In the second layer of our model --the non-core layer-- the private equity investment set of “institutional-grade investments” is expanded by redefining the “other” property type category to include non-core investments (e.g., timber, agriculture, parking). Also, the locational grid is extended to include international investments. Since these two frontiers enfold new risk-reward profiles stemming from different and partially unknown market fundamentals, we believe investors should approach them with the intent of seeking premiums over their core-counterparts.

In the third layer, equity investment positions are complemented by commercial mortgages, which are ultimately collateralized by properties located in any of the private equity cells. It should be noted that participating mortgages are included in the non-core equity layer, since the equity kickers and conversion options attached to them provide equity-like performance and risk profiles. The importance of recognizing the spatial side of commercial mortgages along with the private equity layers can be seen by merely recognizing that a mortgage gives a borrower a “put option,” an option through which a debt position may be

unilaterally converted to equity. Once plan sponsors understand the relative risks in the private core and non-core equity sectors, the appropriate mortgage strategy can be extracted by looking at a combination of the spatial and capital markets. In addition, by recognizing that commercial mortgages will be treated as a subset of fixed income assets by many plan sponsors, advisors can understand how otherwise “spread investors” will often set a floor around their actuarial rates, rather than blindly following yields down.

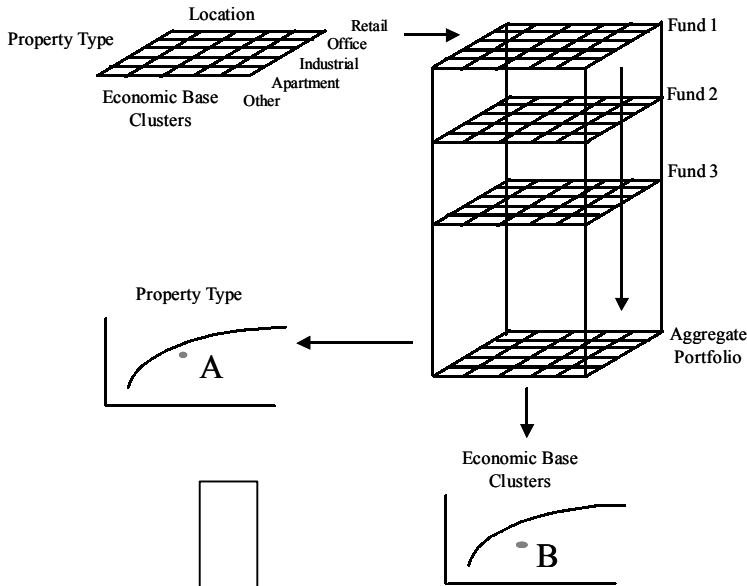
The fourth layer of the Holistic model introduces public real estate securities to the equation. By positioning the risk-reward structure of public real estate directly against private real estate, investors can determine proper return premiums. The importance of such an integrated perspective is bolstered by proponents of public real estate equities who eschew the claim that REITs are actually a stock play, rather than a true real estate investment. These advocates argue that the high historical correlation between REITs and small cap stocks is an artifact and that future correlations will be lower as the sector reaches a critical mass. In addition, investors can coordinate the sector allocations between the public and private sides of the market, concentrating public investments where greater liquidity is needed due to greater market dynamics or shorter investment life cycles. Alternatively, investors can use public REITs as completion funds and make sector bets not possible in the lumpy and illiquid private market, enabling them to go long and short on property types, markets, and asset class exposures. In addition, public prices can be used as an indicator of private market pricing and likely capital flows, enabling investors to identify arbitrage opportunities between the two markets. Finally, the model provides a basis that investors in the recently popular private REITs can use to determine their residual asset class exposures, if the vehicle is converted to a public REIT as an exit strategy.

The final layer in the Second Generation Holistic Model concentrates on emerging investment structures such as Commercial Mortgage-backed Securities (CMBSs) and an array of synthetic investments. In some cases (i.e., rated investment-grade securities), some observers might argue that such investments are insulated from collateral risk and can be viewed independent of real estate market fundamentals and the other slices of the model. While we recognize this position, the fact remains that investors assume some form of safety and liquidity in such investments, and that these investments are ultimately collateralized by the underlying real estate assets. Similarly, in the case of synthetics (i.e., real estate performance pegged against some index) in which investors are buying the spread, expected performance is dependent on the asset mix and composition that make up the benchmark. In such investments, “risk-management by transfer” to a rating agency or by relying on the “best faith” efforts of an issuer will not be adequate to protect investors. We believe that to be prudent, investors, consultants, and/or their advisors must explicitly consider the risks associated with the underlying collateral. This caveat is especially clear with regard to the unrated tranches of CMBSs, due to the reliance on fundamental real estate analysis to assess risks and set required spreads.

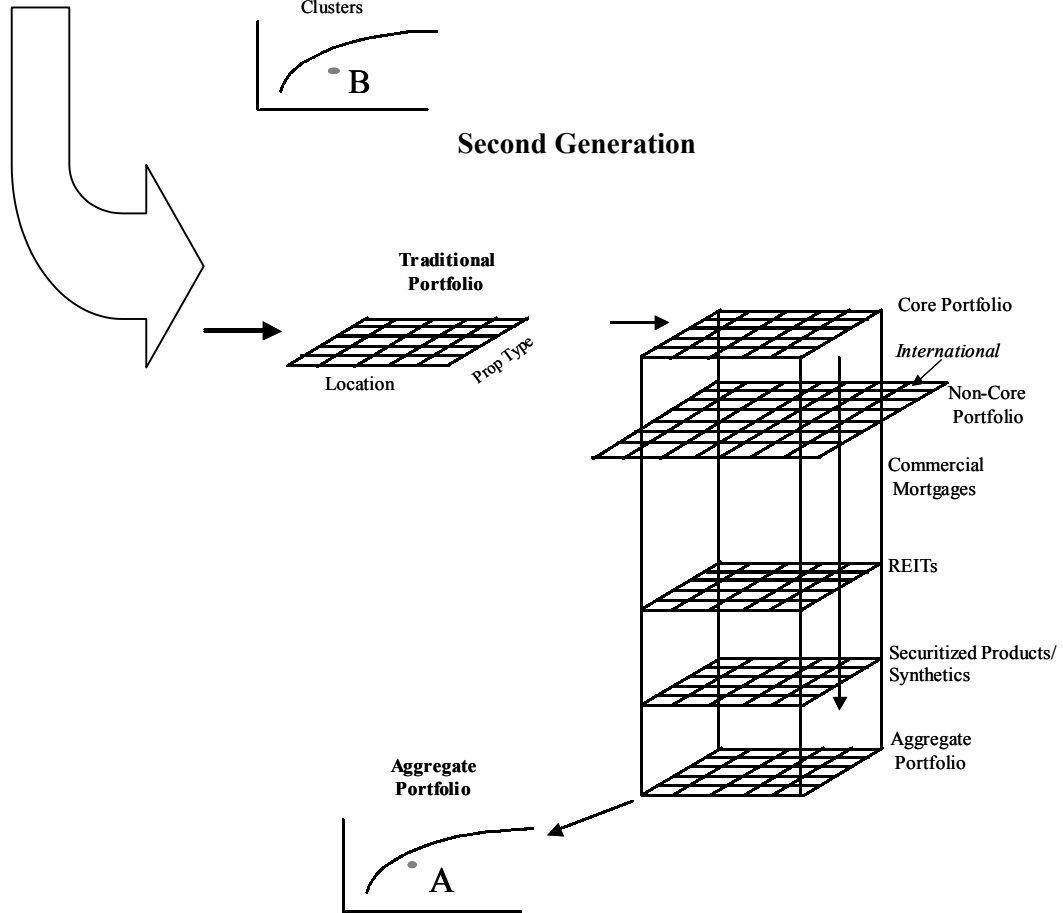


Exhibit 3: Putting it all Together

First Generation



Second Generation



## Conclusion

Despite the interest the Four Quadrant approach has generated, we believed that it would be abandoned or modified to incorporate “Holistic” frameworks which are predicated on a direct link to real estate fundamentals. However, we recognize that portions of the asset class will be increasingly relegated to the level of industry sectors, and that the lines between equity/debt products and private/public markets will continue to blur. To exploit the contributions that real estate can make to mixed asset portfolios, plan sponsors must not allow themselves to trade off fundamental real estate analysis by structure alone. Investors must recognize that the ultimate collateral for real estate-related investments are the underlying properties, the bricks, mortar, logistics, and leases which provide the income streams that create the value of commercial property. Finally, although plan sponsors may delegate some real estate sector plays to their fixed income and equity managers, they should continue to look to the underlying private real estate market to understand risk-return profiles and trade-offs among the various slices of the asset class. To operate in this environment, plan sponsors should use some form of the Holistic Model to ensure that their efforts are integrated among asset classes, so that sector bets can be made with at least an eye to the market fundamentals affecting the underlying asset class.