

**INFORMATION OF NEW CONTRIBUTIONS OF THE
DISSERTATION**

PhD student: **Tran Nhat Khoi**

Course: 2014

Dissertation title: **Architectural spatial organization of agricultural product and foodstuff wholesale market to be suitable for Hanoi urban**

Major: **Architecture**

Code **62580102**

Academic Supervisor: **Prof. PhD Nguyen Quoc Thong**

New contributions of the dissertation are of scientific and practical value, including:

- *Theoretical value*: adding new theoretical knowledge about architectural design of agricultural products and foodstuffs (APF) wholesale market (WSM) building in Hanoi;

- *Practical value*: Proposing principles and solutions to Architectural spatial organization (ASO) of agricultural products and foodstuffs (APF) wholesale market (WSM) in Hanoi reference for architects in the work of consulting, designing APF WSM in other provinces.

Specifically as follows:

1) The dissertation has summarized the development process of APF WSM Architecture of Hanoi as well as in the world, over time phasing. Based on the identification of 6 criteria, the thesis has selected 8 APF WSMs in Hanoi to conduct surveys, assess the situation and identify outstanding issues of APF WSM architecture in Hanoi , thereby showing:

- APF WSM appears and develops in parallel with the city, directly affected by the economic urban resources as a urban creation factor. Therefore, it can be affirmed: APF WSM is always an indispensable building category in the modern urban;

- APF WSM is a type of wholesale market with specific characteristics specific to the regular market, newly introduced into the management system and networked activities closely related to the development of Hanoi; at the same time, it is one of motivation to promote urban development (urban creation factor);

- The difference between APF WSM and regular retail market is considered in 3 aspects of planning, building architecture and operation management. In particular, the problem is that the current architecture does not fully meet the main sequence of APF WSM's activities: "*Unloading=> Choosing / Auction /Bidding => wholesale Buying=> sorting / packing / labeling => Distribution / Wholesale Selling => Loading*", which is often skewed toward the distribution / retail as for a regular market.

2) The dissertation has gathered ASO of APF WSM scientific bases, including the following issues: Theory, design basis, and factors affecting APF WSM architecture of Hanoi.

3) The dissertation is based on 6 perspectives, built 7 ASO's principles for APF WSM Hanoi: 1) *Site selection*, 2) *Scale determination*, 3) *Functional spatial components in the building*, 4) *Architectural spatial organization of the building*, 5) *Structure*, 6) *Other technical issues*, and 7) *Management*; meet the requirements of Network Planning, ASO and Management of APF WSM.

With an emphasis on ASO of APF WSM, the principles have identified 10 specific functional spaces of APF WSM. On that basis clarifies the ASO diagram; pointed out calculating method of the land scale, building scale, area ratio of functional space groups as well as related structural and technical principles corresponding to functional space groups.

4) The dissertation has conducted classification and identification of APF WSM Hanoi Network. In terms of categorizing, corresponding to the position of APF WSM in relation to urban areas, it is divided into 3 categories: inside urban, at urban border and outside urban; Each type is considered with its own pros / cons and its relationship to the organization of 10 functional space groups. Accordingly, the classification of

WSM according to urban size is conducted, as a basis for proposing a plan to determine the APF WSM Network suitable for Hanoi urban development..

5) From clearly identifying the main activity chain and the established Principles, the dissertation proposes ASO solutions for APF WSM sequentially for spatial levels 1) *Basic stall*, 2) *Market Main Building* and 3) *Master plan of APF WSM*. The proposed ASO solutions for the Basic Stall include 3 models of G1, G2, and G3; for the Main Market Building including 3 models N1, N2, and N3; for the Master plan include 2 models T1 and T2. These proposed solutions correspond to the operational situation of the main activity chain, ensuring compliance with the established Principles. Accordingly, solutions for the development orientation of reserved space is also proposed for horizontal / deep / combined development situations, be consistent with the characteristics of APF WSM.

6) APF WSM management solutions are also proposed in three aspects: Urban planning, Architectural Design, Operation; towards the supplement of design standards / regulations for the APF WSM category to match with the reality, supplementing the establishing / predicting steps for the scale in the Planning; architectural management inside / outside the building when operating.

The new contributions of the thesis are consistent with the goals and objectives set out./.

Hanoi - March 31st, 2019

Academic Supervisor

PhD student

Tran Nhat Khoi

Prof. PhD Nguyen Quoc Thong