シックハウス対策技術の開発

Development of Countermeasure Technology on Residential Indoor Air Quality

室内環境の健康・快適性に対する関心が急速に高まる中、建物の断熱気密化やさまざまな化学物質を発生する建材・薬剤の多用などが相まって住宅内の空気環境を悪化させる、いわゆる「シックハウス問題」が社会的に関心を呼び、早急な対応が求められている。この改善には、個々の建築構造や環境側の要求条件に応じた材料選択と換気設計が不可欠であり、それを実現する設計・施工・維持管理の技術の開発が必要とされている。

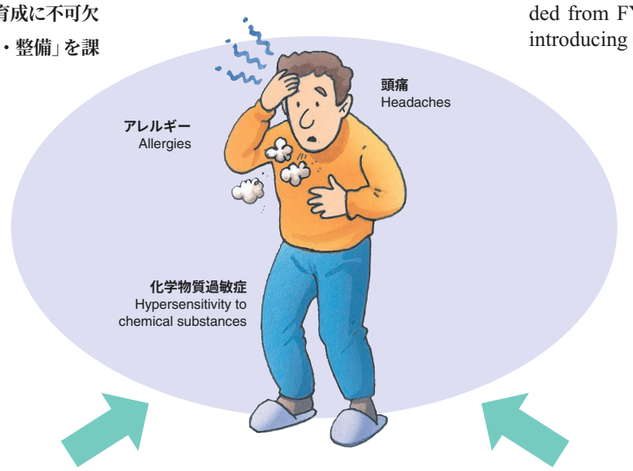
本プロジェクトでは、対策対象である「室内空気汚染と健康被害、発生（抑制）メカニズムの実態解明」、費用や精度の点で課題の多い「現場測定・評価システムの改善」、新しい材料・機器・予測技術を活用した「設計施工技術、換気設計技術の開発」、消費者保護と産業育成に不可欠な「情報提供システムの開発・整備」を課題に掲げ、研究開発を実施する。

なお、平成14年度からは建築基準法における規制導入を視野におき、住宅以外の居室にも研究対象を広げている。

Interest is quickly growing in terms of the health and comfort of indoor environments, and social concern has been directed towards "sick house/building syndrome." This refers to the deterioration of the air quality in houses due to the combination of insulation-induced hermetic environments and various volatile substances generated by construction materials and chemicals, and rapid response to this issue is required. Selection of materials in accordance with particular structures and environmentally imposed conditions is essential, as is ventilation design, and technological development is needed for design, construction, and maintenance management that will realize these responses.

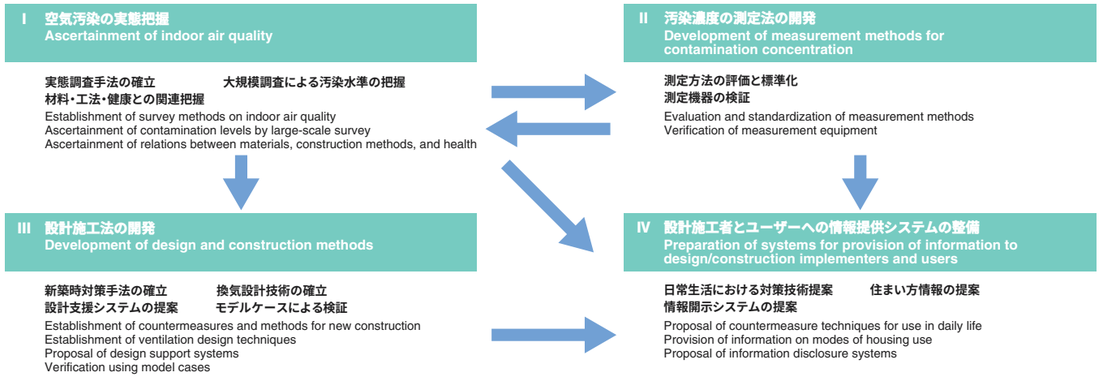
Research and development is being pursued in the context of a number of themes, including elucidation of mechanisms of generation (and suppression) of indoor air contamination and health damage, improvement of on-site measurement and evaluation systems (which entail numerous issues relating to cost and accuracy), development of technologies for design/construction of envelope and ventilation design (making use of new materials, equipment, and prediction technology), and development and preparation of systems for the provision of information (essential for consumer protection and industrial incubation).

Moreover, research frame is extended from FY2002 in consideration of introducing the Building Code.



■研究概要と成果

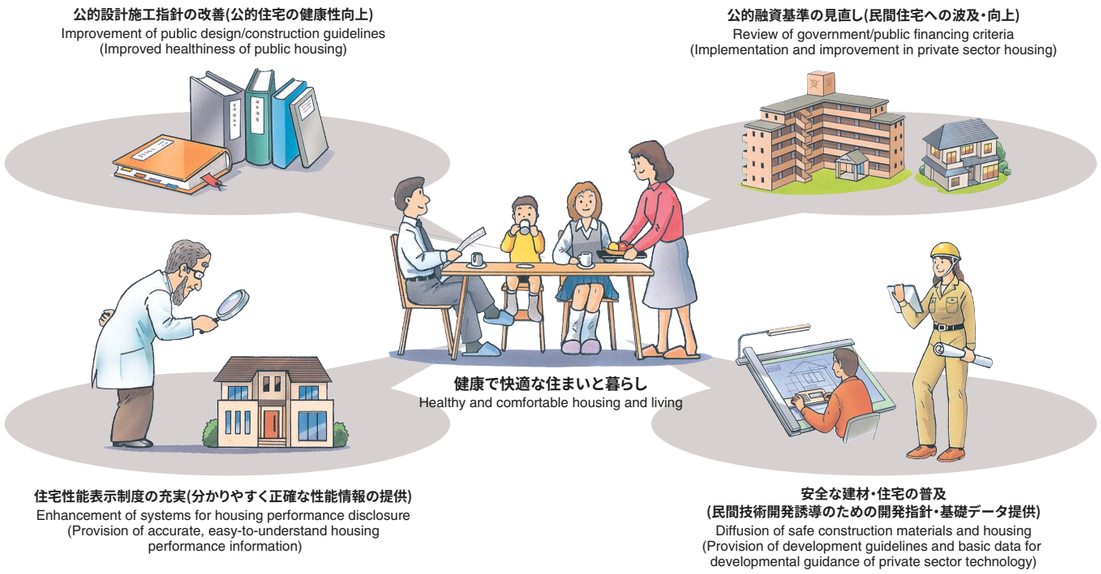
Research outline and results



汚染実態と関連要因の把握	Ascertainment of contamination conditions and related factors
簡易測定法・設計施工ガイドラインの整備	Preparation of simplified measurement methods and design/construction guidelines
CADとリンクした設計支援／情報提供ツールの提供	Provision of CAD-linked design support/information provision tools
居住者のためのユーザーズマニュアルの整備	Preparation of user's manuals for occupants

■成果の活用

Application of results



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