



# ISO Form 4

## NEW WORK ITEM PROPOSAL (NP)

<b>Circulation date:</b> 2024-05-31	<b>Reference number:</b> ISO/NP 25268  ISO/TC 304
<b>Closing date for voting:</b> 2024-08-23	
<b>Proposer</b> KATS	N 442
<b>Secretariat</b> ANSI	

A proposal for a new work item within the scope of an existing committee shall be submitted to the secretariat of that committee.

A proposal for a new project committee shall be submitted to the Central Secretariat, which will process the proposal in accordance with ISO/IEC Directives, Part 1, Clause 2.3.

Guidelines for proposing and justifying new work items or new fields of technical activity (Project Committee) are given in ISO/IEC Directives, Part 1, Annex C.

**IMPORTANT NOTE:** Proposals without adequate justification and supporting information risk rejection or referral to the originator.

- The proposer confirms that this proposal has been drafted in compliance with Annex C of ISO/IEC Directives, Part 1.

### PROPOSAL

(to be completed by the proposer, following discussion with committee leadership if appropriate)

**TITLE****English title:**

Guidelines for Hospital Internal Logistics Services using Autonomous Mobile Robots

**French title:**

*(In the case of an amendment, revision or a new part of an existing document, show the reference number and current title)*

**SCOPE**

This document gives guidelines for Healthcare Organization Management including healthcare suppliers and manufacturers of Autonomous Mobile Robots (AMRs) where they implement the internal hospital logistics using autonomous mobile robots. It includes the key components that should be considered to provide safe and reliable internal hospital logistics of pharmaceuticals. It covers physical arrangement of AMR including medication packaging, delivery chambers, emergency halt method and logistics environment of hospitals such as elevator in-and-out sequence, locations of the delivery.

**PURPOSE AND JUSTIFICATION**

The healthcare industry has recently emerged as a sector heavily reliant on labor in the contemporary economy. This is particularly true for medium to large-sized hospitals with over 500 beds, which continue to depend on human labor despite significant investments in centralized patient information processing systems. These hospitals often have medical and support infrastructure spread across multiple large buildings, necessitating well-defined logistics coordination to minimize human delivery traffic. One of the prime logistic processes of this labor-intensive process is the delivery of medication from the internal pharmacy to the respective wards in large hospitals.

In the other hands, hospitals in large metropolitan areas like Seoul are facing significant challenges difficulties due to rapidly increasing non-medical staff payroll costs, which are undermining their financial stability. Additionally, the current labor market shortage is making it difficult to recruit a sufficient number of staff members for shift-based positions.

Given the growth of the healthcare market and the increasing labor dependency of modern hospitals, the role of automation and/or robot-based medication delivery services is becoming an alternative solution for the internal hospital logistic process. These services not only ensure the provision of high-quality medical care, but also contribute to the financial sustainability in health organization management.

The use of Autonomous Mobile Robots (AMRs) has become standard for indoor automated logistics operations. Many hospitals worldwide have attempted to implement these robots for various delivery tasks within their facilities. However, most operational knowledge is based on heuristic platforms due to the lack of available standards. In fact, some hospitals have developed their own skills and published them without a standardization framework. In this situation, this standard will be a good guideline for the internal hospital logistic stakeholders such robot manufacturer, health providers and hospital management.

There are many urgent issues to address for application of AMRs to medication delivery in large medical facilities, despite the adoption of commercially available, market-proven AMRs. These issues may include, but not limited to, the regulation of motion velocity, sound level, physical dimensions, the size and internal structure of the medication drawer, security lock mechanisms, emergency stop functions, and many others. Additionally, to enable AMRs to use building elevators—which are typically reserved for human use—a detailed standardized framework for seamless service must be established.

**Sustainable Development Goals (SDGs)**

Goal 3: Good Health and Well-Being for People  
Goal 8: Decent Work and Economic Growth  
Goal 9: Industry, Innovation, and Infrastructure  
Goal 11: Sustainable Cities and Communities

**Preparatory work**

A draft is attached       An outline is attached       An existing document serving as the initial basis is attached

The proposer is prepared to undertake the preparatory work required:

Yes       No

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**If a draft is attached to this proposal:**

Please select from one of the following options:

The draft document can be registered at Preparatory stage (WD – stage 20.00)  
 The draft document can be registered at Committee stage (CD – stage 30.00)  
 The draft document can be registered at enquiry stage (DIS – stage 40.00)

If the attached document is copyrighted or includes copyrighted content:

The proposer confirms that copyright permission has been granted for ISO to use this content in compliance with the ISO/IEC Directives, Part 1 (see also the Declaration on copyright).

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**Is this proposal for an ISO management System Standard (MSS)?**

Yes       No

Note: If yes, this proposal must have an accompanying justification study. Please see the Consolidated Supplement to the ISO/IEC Directives, Part 1, Annex SL or Annex JG

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**Indication of the preferred type to be developed**

International Standard       Technical Specification  
 Publicly Available Specification \*

\* While a formal NP ballot is not required to start developing a PAS (no eForm04), the NP form may provide useful information for the committee P-members to consider when deciding to initiate a Publicly Available Specification.

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**Proposed Standard Development Track (SDT – to be discussed by the proposer with the committee manager or ISO/CS)**

18 months       24 months       36 months

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**Draft project plan (as discussed with committee leadership)**

Proposed date for first meeting: [2024-10-07](#)

Dates for key milestones: Circulation of 1st Working Draft (if any) to experts: [2024-10-07](#)  
Committee Draft consultation (if any): [2025-08-22](#)  
DIS submission\*: [2026-08-21](#)  
Publication\*: [2027-09-24](#)

\* Target Dates for DIS submission and Publication should be set a few weeks ahead of the limit dates automatically determined when selecting the SDT.

NOTE: [ISO/Meetings](#) and [ISO/Projects](#) allow you to register and continuously update the meeting dates and project target dates during the development of the project.

<p><b>Known patented items (see ISO/IEC Directives, Part 1 for important guidance)</b></p> <p><input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No</p> <p>If "Yes", provide full information as annex</p>																					
<p><b>Co-ordination of work:</b> To the best of your knowledge, has this or a similar proposal been submitted to another standards development organization?</p> <p><input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No</p> <p>If "Yes", please specify which one(s):</p>																					
<p><b>Listing of relevant documents (such as standards and regulations) at international, regional and national level</b></p>																					
<p><b>Identification and description of relevant affected stakeholder categories (Please see ISO CONNECT)</b></p> <table border="1"> <thead> <tr> <th></th> <th><b>Benefits/Impacts/Examples</b></th> </tr> </thead> <tbody> <tr> <td><b>Industry and commerce - large industry</b></td> <td>Reduce the expense of the internal Hospital logistics for the Health Organization and improve satisfaction of patients and health providers in hospitals</td> </tr> <tr> <td><b>Industry and commerce - SMEs</b></td> <td>SMEs for Automatic Mobile Robot manufacturers and suppliers would advocate this standard.</td> </tr> <tr> <td><b>Government</b></td> <td>Safety for Health providers and labor environments would be improved in hospital</td> </tr> <tr> <td><b>Consumers</b></td> <td>Hospital management and AMR manufacturers will have many concerns about this standard</td> </tr> <tr> <td><b>Labour</b></td> <td>Reduce labor of health providers and compensate the shortage of human resource in hospital</td> </tr> <tr> <td><b>Academic and research bodies</b></td> <td>Investigation of Internal hospital logistics will be increased.</td> </tr> <tr> <td><b>Standards application businesses</b></td> <td>New business for certification is possible.</td> </tr> <tr> <td><b>Non-governmental organizations</b></td> <td>Human right and labor environments will be improved in hospitals.</td> </tr> <tr> <td><b>Other (please specify)</b></td> <td></td> </tr> </tbody> </table>			<b>Benefits/Impacts/Examples</b>	<b>Industry and commerce - large industry</b>	Reduce the expense of the internal Hospital logistics for the Health Organization and improve satisfaction of patients and health providers in hospitals	<b>Industry and commerce - SMEs</b>	SMEs for Automatic Mobile Robot manufacturers and suppliers would advocate this standard.	<b>Government</b>	Safety for Health providers and labor environments would be improved in hospital	<b>Consumers</b>	Hospital management and AMR manufacturers will have many concerns about this standard	<b>Labour</b>	Reduce labor of health providers and compensate the shortage of human resource in hospital	<b>Academic and research bodies</b>	Investigation of Internal hospital logistics will be increased.	<b>Standards application businesses</b>	New business for certification is possible.	<b>Non-governmental organizations</b>	Human right and labor environments will be improved in hospitals.	<b>Other (please specify)</b>	
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<p><b>Liaisons:</b></p> <p>A listing of relevant external international organizations or internal parties (other ISO and/or IEC committees) to be engaged as liaisons in the development of the deliverable.</p> <p><a href="#">ISO TC 299 - Robotics</a></p>	<p><b>Joint/parallel work:</b></p> <p><b>Possible joint/parallel work with:</b></p> <p><input type="checkbox"/> IEC (please specify committee ID)</p> <p><input type="checkbox"/> CEN (please specify committee ID)</p> <p><input type="checkbox"/> Other (please specify)</p>																				

**A listing of relevant countries which are not already P-members of the committee.**

Note: The Committee Manager shall distribute this NP to the ISO members of the countries listed above to ask if they wish to participate in this work

**Proposed Project Leader** (name and e-mail address)

: Ja Choon Koo, Ph.D. and Me Yeon Lee, M.D,  
Ph.D  
jckoo@skku.edu, mylee@hallym.or.kr

**Name of the Proposer**  
(include contact information)

Yong Seok Ihn, Ph.D.  
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**This proposal will be developed by:**

- An existing Working Group:  
 A new Working Group: (title: Hospital Internal Logistics Services)

(Note: establishment of a new Working Group requires approval by the parent committee)

- The TC/SC directly  
 To be determined:

**Supplementary information relating to the proposal**

- This proposal relates to a new ISO document  
 This proposal relates to the adoption as an active project of an item currently registered as a Preliminary Work Item  
 This proposal relates to the re-establishment of a cancelled project as an active project

Other:

**Maintenance agencies (MA) and registration authorities (RA)**

- This proposal requires the designation of a maintenance agency. If so, please identify the potential candidate:  
 This proposal requires the designation of a registration authority. If so, please identify the potential candidate:

NOTE: Selection and appointment of the MA or RA are subject to the procedure outlined in ISO/IEC Directives, Part 1, Annex G and Annex H.

- Annex(es) are included with this proposal (provide details)

**Additional information/question(s)**