

CREATIVE LIBRARIAN IN THE ERA SOCIETY 5.0

Riche Cynthia Johan

Disampaikan dalam Literacy Event – Open Library Telkom University

Bandung, 13 Oktober 2022

Mengapa pustakawan perlu kreatif?

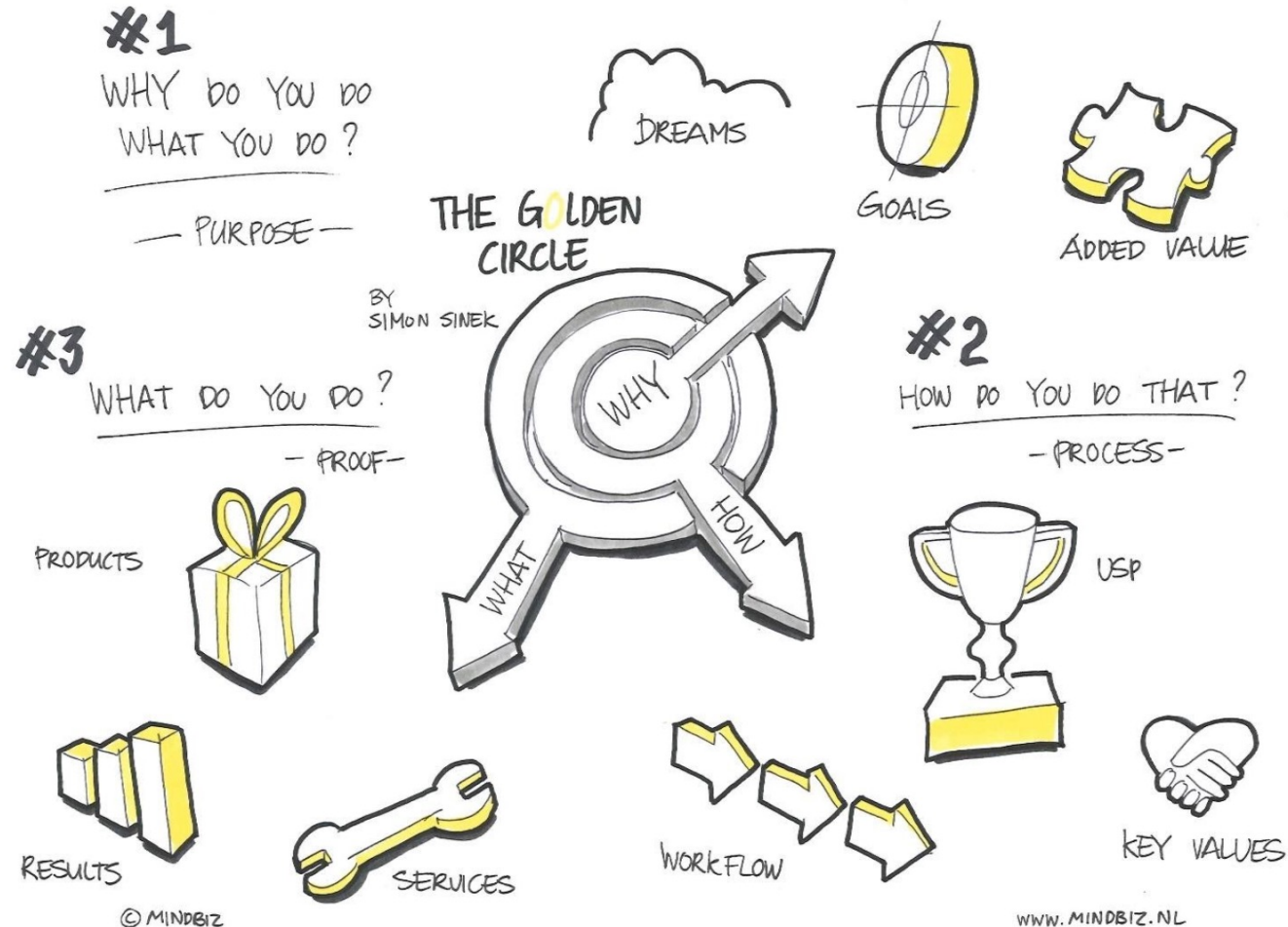
Slido.com

Code #4747756

<https://app.sli.do/event/aG7TGbvQhqRc54dw6a9BeU>

The Golden Circle

By Simon Sinek





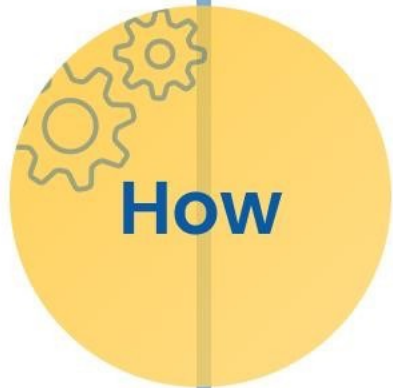
Era Society 5.0



Skills for 21st-Century Librarians

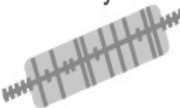


Use Creativity to Create Change in Your Library





Era Society 5.0

	Society 1.0	Society 2.0	Society 3.0	Society 4.0	Society 5.0
Society	Hunter-gatherer	Agrarian	Industrial	Information	Super smart
Productive approach	Capture/Gather	Manufacture	Mechanization	ICT	Merging of cyberspace and physical space
Material	Stone•Soil	Metal	Plastic	Semiconductor	Material 5.0*
Transport	Foot	Ox, horse	Motor car, boat, plane	Multimobility	Autonomous driving
Form of settlement	Nomadic, small settlement 	Fortified city 	Linear (industrial) city 	Network city 	Autonomous decentralized city 
City ideals	Viability	Defensiveness	Functionality	Profitability	Humanity

1

Sains

Inovasi Digital

2

Informasi

Ruang Fisik dan Siber

How



Era Society 5.0

How



“Society 5.0 is a human-centred society that balances economic progress with solving social problems through a system that effectively integrates cyberspace and physical space”

“Super Smart Society”

*Source Pidato Sinzo Abe dan World Economic Forum
Di Davos, Januari 2019*



Library 5.0 (As a Concept)

Library 1.0 Publishing

Library 2.0 Participate, Share, Open

Library 3.0 Semantic Web, Meta data, Ontology,

Research	Contents
Chauhan (2009a)	- It uses technologies such as dynamic content, blogs, social networks, tagging, wiki, podcasts, and mashups on the web. Semantic technology and ontology are applied to distributed and unorganized information in situations where information is distributed and not organized on the web. - Information users and knowledge organizers, speed, accuracy, and systematic organization of information available on the web
David (2010)	- 3D web, semantic web, and real-world web will play an important role in future literature information and libraries.
Oh and Won (2007)	- Providing meaning-based services, providing various access points, supporting collective intellectual activities, and efficient management of information resources, etc.
Noh (2010)	- A library that applies semantic retrieval, real-time web, cloud computing, mobile web, and linked data. The library's information resources are structured semantically based on ontology, connected to library resources around the world, and can be searched semantically based on this, and a mobile library is realized. - SSDL that consists of an ontology system and actively supports user participation and collaboration, ubiquitous mobile library using smartphones, RFID, and QRCode technologies, LOD-based libraries that connect around the world, a library where semantic-based knowledge structure and semantic-based search are possible, a library where ubiquitous content is distributed, and a library where semantic-based library blogs and communities are activated

Konsep Library 3.0 (Sumber: Noh , 2022)

Library 4.0 Eco Friendliness, Machine Learning, Big Data, IoT, Data Governance

Service	Description
Chauhan (2009)	- The web itself is a library. Web can only be divided into "learning web" and "spamming or tracking web" - The learning web is "huge open virtual library," and "spamming or tracking web" is in charge of entertainment - Library 4.0 can only survive in the web 4.0 era by cooperating with various professional academic networks. This form of cooperation will be Library 4.0, and it is a library built in a virtual library environment where all services are provided virtually
Crane et al. (2006)	- On the huge web, users produce and share knowledge with collective intelligence and spread open content - Users of digital books will now be able to dynamically connect and use all materials related to the searched data, not just receive PDF-type searched materials
Han et al. (2011)	- A library that provides augmented reality information and book evaluation information on real books, augmented reality information on library buildings or objects and augmented reality information on internal facilities of the library
Noh (2010)	- The keywords for Library 4.0 include: Intelligent, Makerspace, Context-Aware Technology, Open Contents, BigData, Cloud Service, Augmented Reality, State-of-art Display, Librarian 4.0, etc.

Konsep Library 4.0 (Sumber: Noh , 2022)

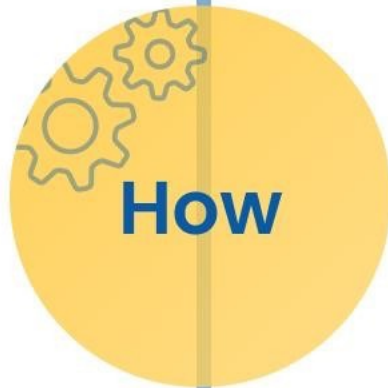
Library 5.0 AI, AR, VR, Metaverse

Service	Description
Data and machine learning customized services	- They provide various types of library big data and analysis data such as surge data, loan data, and loan book rankings. It also provides 1:1 customized curation services, individual customized book recommendation services, and library-specific services using data
Artificial intelligence-based services and reference services	- They provide reference information services through chatbots operated through artificial intelligence technologies such as deep learning and natural language processing. In addition, it searches for access user information through artificial intelligence's face recognition system and provides AI book recommendation services.
IoT-based services	- They apply NFC and beacon to provide access and facility utilization, library management, recommended services, various library management services, location-based services, and user education.
VR/AR-based smart services	- They are based on installation and provision of space related to virtual reality and augmented reality, expansion of experiential services based on virtual reality, augmented reality and mixed reality, and development of augmented reality technology-based educational content.
Autonomous object-based smart services	- They provide a variety of library services ranging from RFID and self-driving tool robots such as sensors and robots and drones to artificial intelligence-based self-driving book return robots.
The blockchain-based information sharing platforms	- They provide all services currently available online and offline by utilizing blockchain technology that allows participants within the network to jointly record, verify, store, and execute information and value movements without intermediaries.
5G-based ultra-high-speed, ultra-low-latency, high-trust, and ultra-connectivity services	- They provide high-speed utilization services, ultra-low-latency and high-trust features utilization services, and ultra-connectivity features-related services based on 5SG technologies.
Virtual space and Metaverse-based services	- They offer almost all services that are provided online and offline within Metaverse libraries, a new dimension of digital virtual space.

Konsep Library 5.0 (Sumber: Noh , 2022)



Library 5.0 (As a Concept)



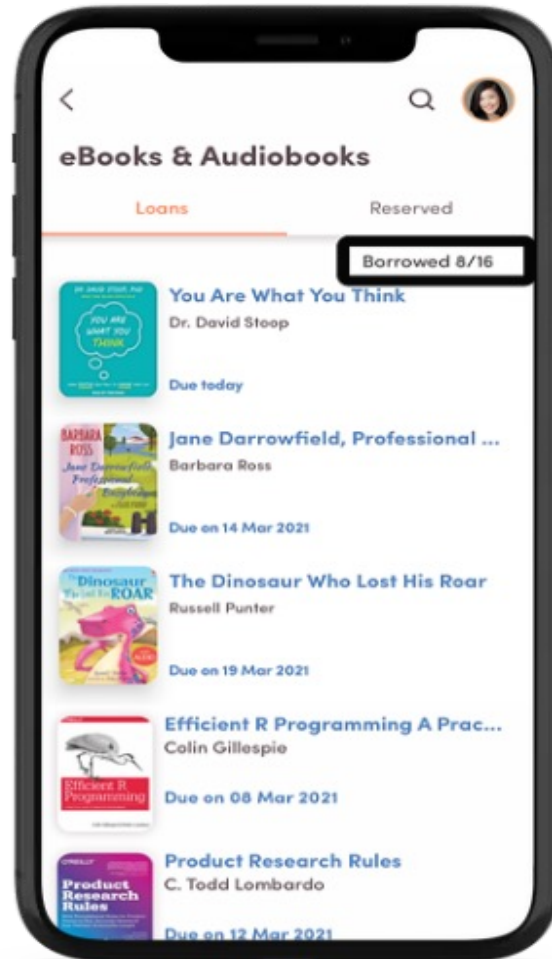
Item	Library 1.0	Library 2.0	Library 3.0	Library 4.0	Library 5.0
Time	1990–2005	2006–2010	2011–2015	2016–2020	2021–2025
Interaction	One-way, one-sided	Two-way, public	Personalized, customized	Personalized, popularized, customized	Personalized, customized
Related technologies	MARC HTML	RSS, WIKI, BLOG, Ajax, Flickr, Tagging, Podcast, Bookmark, Mash-up, Toolbar, etc.	Semantic search. Ontology. Mobile technology. Semantic technology, artificial intelligence, situation recognition, cloud computing	Big data, artificial intelligence, Internet of Things, AR/VR	Big data, artificial intelligence, Internet of Things, AR/VR, autonomous objects, energy efficiency, blockchain, 5G
Keywords	Publishing	Participate, share, open	Semantic web, metadata, ontology	Eco-friendliness. Machine learning, big data, the Internet of Things, data governance	Social safety net, Civic Tech, Shared Space, Artificial Intelligence, Augmented Reality (AR/VR), Autonomous Things, Energy Efficiency, Blockchain, 5G
Information provision	Library-centered production. Accumulation focus	Reproduction through user participation	The machine meets the needs of the user	The machine meets the needs of the user's agent	The agent of the provider meets the needs of the user agent
Information consumption	Reading	Reading, writing	Reading, writing, executing.	Reading, writing, executing, interacting	Reading, writing, executing, interacting
Information users	Human	Human	Human, machine	Human, machine	Human, machine, agent (avatar)
Information power	Closed. Concentrated. Librarian-centered	Popularization, concentration. User-centered	Decentralization (selecting only the necessary information) Distribution of power among users	Decentralization, distribution of power between users, and IoT machines	Decentralization, distribution of power between users, and AI machines
Response terminal	PC	PC, mobile	Various devices and accessories including PC, mobile, iPad, watches, etc.	All the IoT-based devices including PC, mobile, iPad, watches, etc.	All the AI-embedded and IoT-based devices including PC, mobile, iPad, watches, etc.
Knowledge structure	MARC Metadata	MARCXML, MODS DOI identification system XML/RDF tech structure	FRBR Ontology Objects of semantic structure	FRBR Ontology Semantic KB	FRBR Ontology Semantic KB AI aware contents Natural language documents

Konsep Library 5.0 (Sumber: Noh, 2022)



Library in Society 5.0

How



Integrated System

One Apps For All

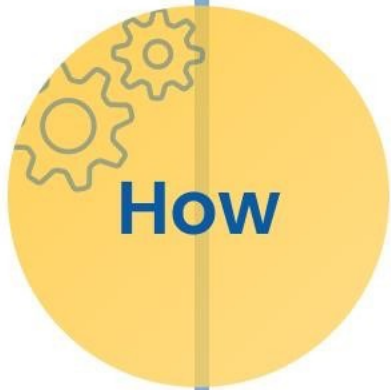


Salah Satu Tampilan di NLB Apps (Sumber: NLB SG)

CU-NEX App (Source: chula.ac.th)



Skills for 21st-Century Librarians



Content Knowledge

Creativity

Evaluation

Event Planning

Financial Skills

Interpersonal Skills

Knowledge of the Community & Outreach

Marketing

Organizational Skills

Norlander, R.J., & Barchas-Lichtenstein, J. (2021).



Use Creativity to Create Change in Your Library



The Psychology of Creativity



Creativity and its use in design thinking

<https://www.youtube.com/watch?v=-ySx-S5FcCI&t=208s>

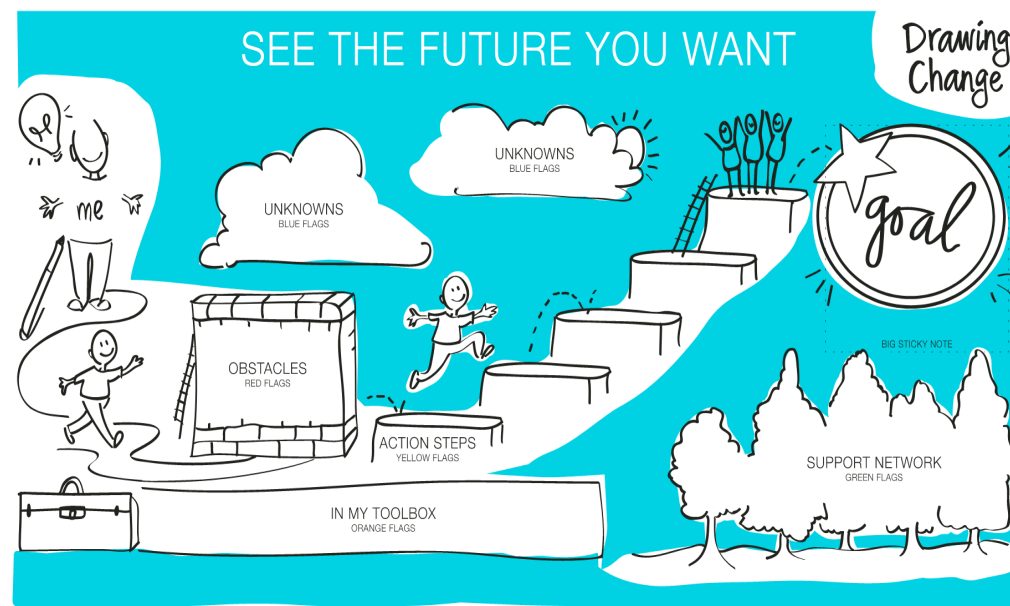
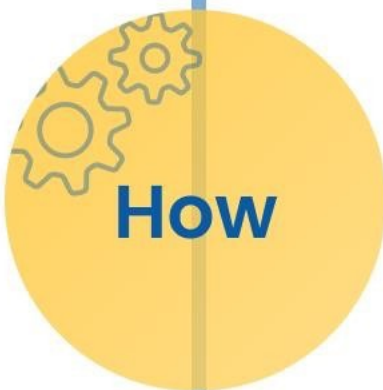


Creativity in Context



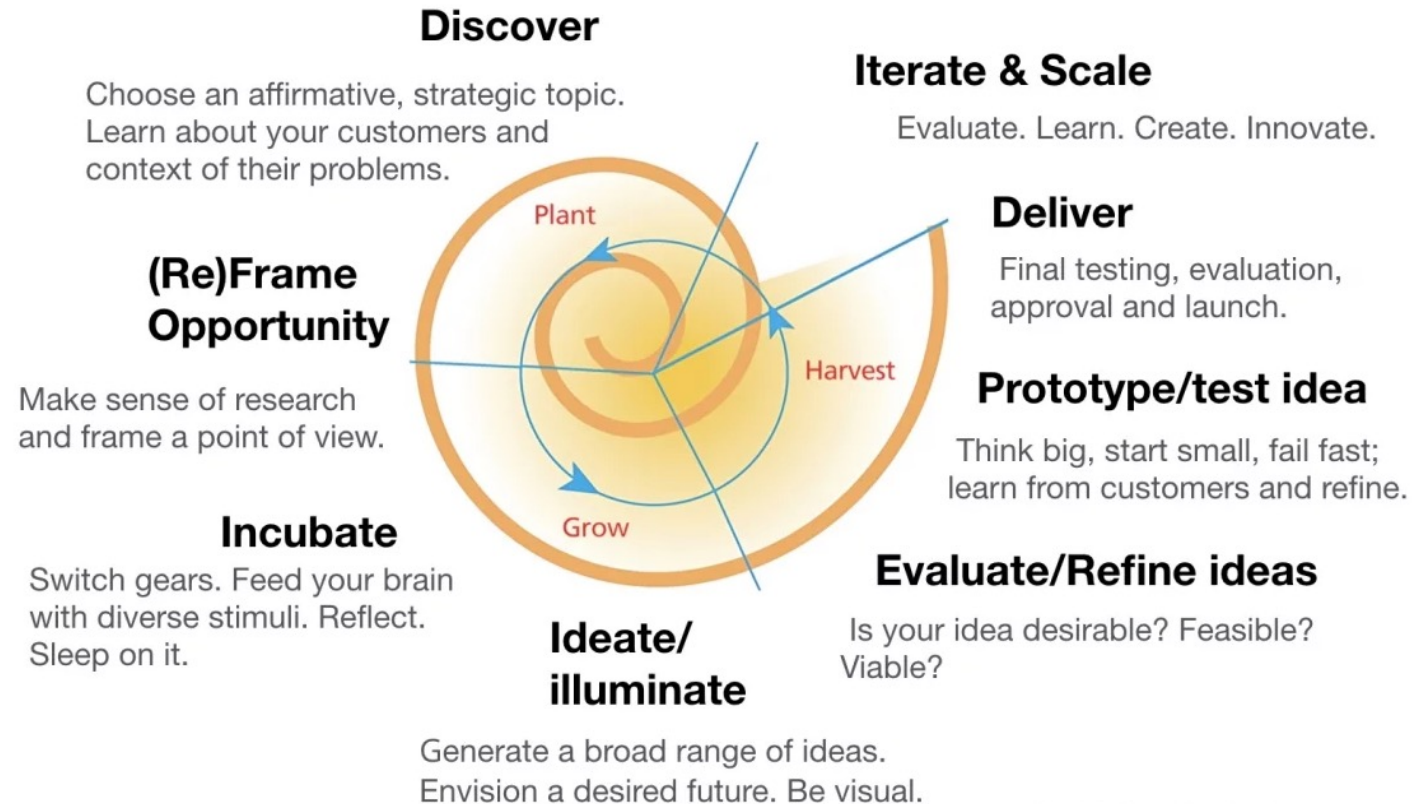
Fostering Creativity

Falciani-White, Nancy. (2021).



<https://drawingchange.com/resource/a-free-creative-planning-visual-template-for-you/>

Creative at Work...



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<https://www.creativityatwork.com/design-thinking-strategy-for-innovation/>



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Terima Kasih

Bandung, 13 Oktober 2022