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Digital Health
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DIGITAL HEALTH SYMPOSIUM

March 1-5, 2021

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Beyond Covid: From Virtual Care to Connected Health



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**Beyond Covid:
From Virtual Care
to Connected Health**

A TELEHEALTH CAPABILITY MATURITY MODEL: ACCELERATING SUCCESS

Christian Milaster, MS

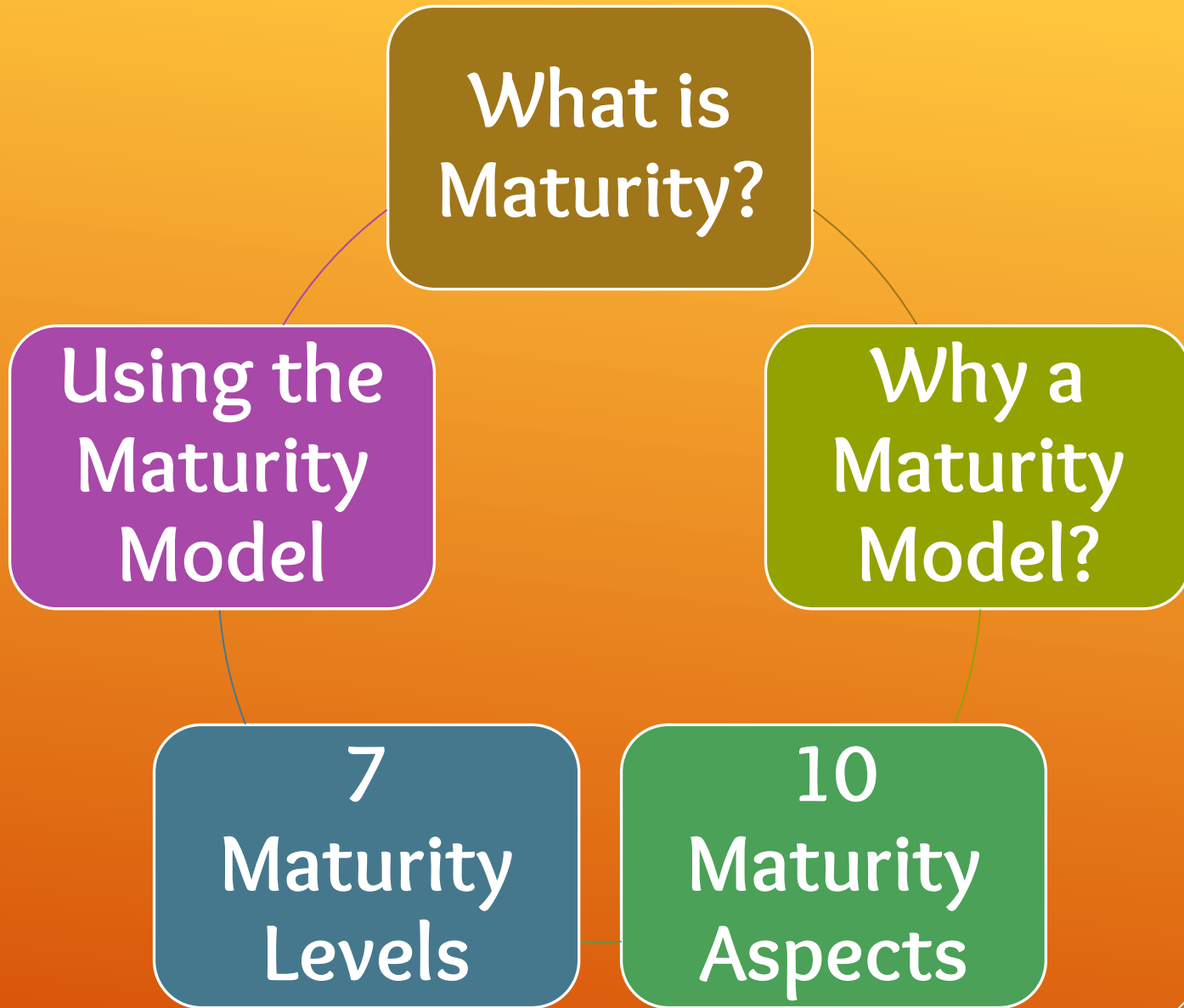
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Symposium 2021: From Virtual Care to Connected Health



WHAT IS MATURITY?

**Everybody agreed,
until somebody
defined it.**

Christian Milaster
Digital Health Transformation Advisor

IngeniumHealthcareAdvisors.com

Telemedicine | Virtual Care

Practicing Medicine At a Distance

Telehealth

Delivering Care At a Distance

DEFINITIONS

Connected Health

Empowered Wellness

Empowered Wellness

**Enabling the members
of the communities we serve
to be well, get well and stay well
regardless of time and location.**

DEFINITIONS

Maturity [1]

Fully developed.

Having reached the most advanced stage.

Maturity [2]

The Ability to Perform Independently

Maturity [3]

The Ability of High Performance

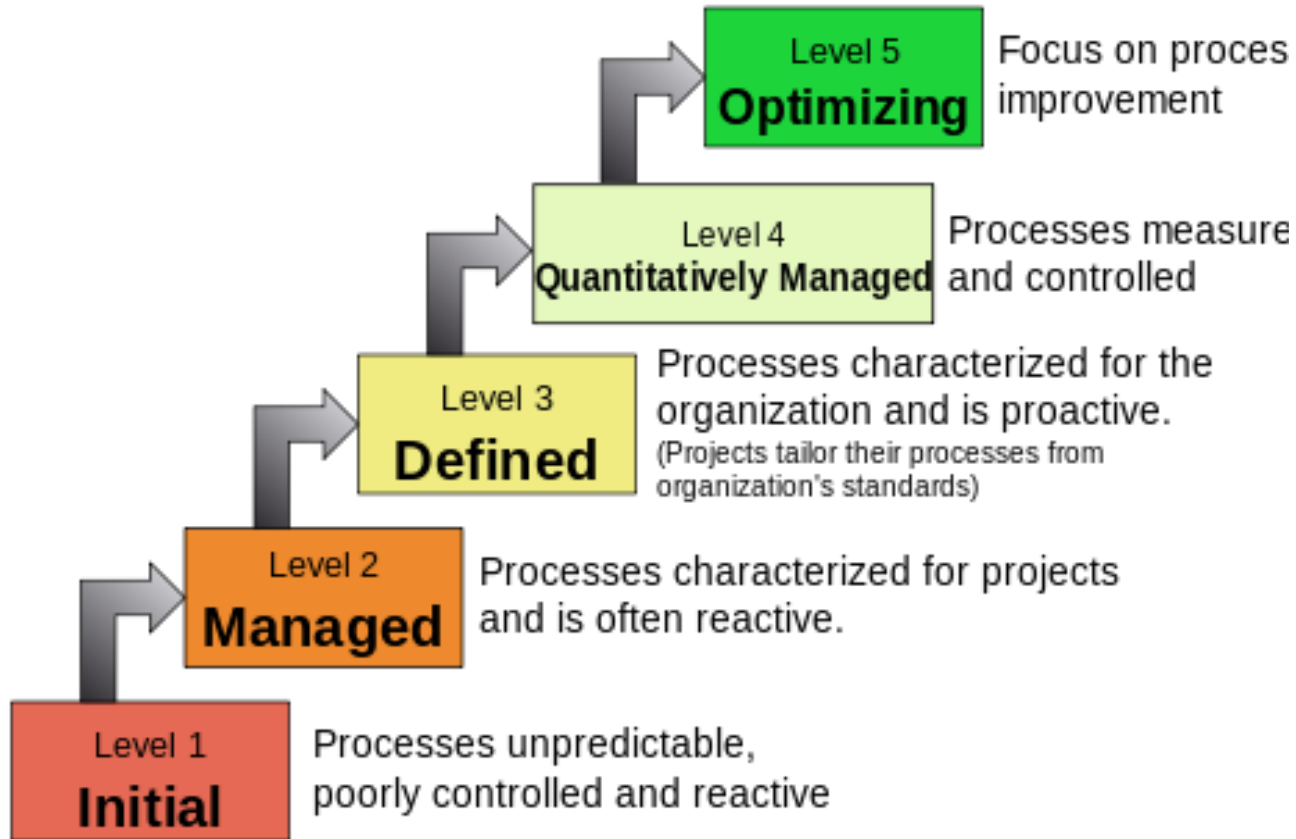
DEFINITIONS

Maturity Model (n)

A set of structured levels
describing how well the
behaviors, practices and processes
of an organization
can reliably and sustainably
produce required outcomes

DEFINITIONS

Characteristics of the Maturity levels



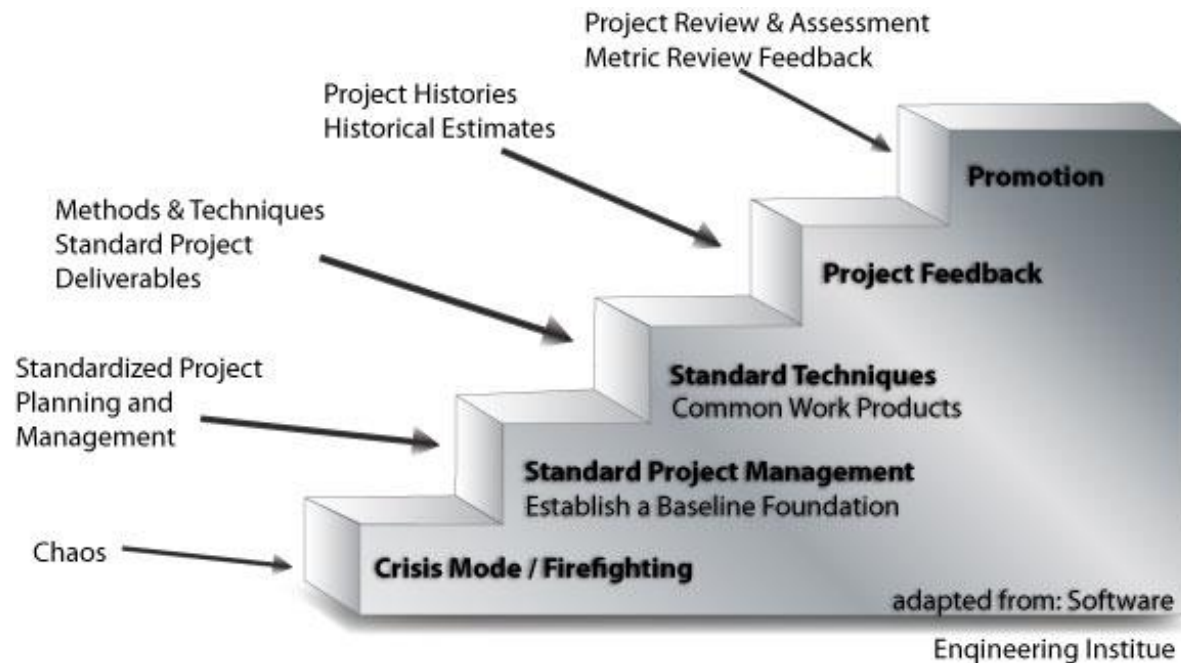
HISTORY OF CAPABILITY MATURITY MODELS

1986 by the
Software Engineering
Institute (SEI)
to improve
Software Development

HISTORY OF CAPABILITY MATURITY MODELS

Applied to
Other Domains

e.g.,
Project Management



Requirements Process Maturity Model

	1 Initial (ad hoc)	2 Managed (organized)	3 Defined (structured)	4 Quantitatively Managed (traced)	5 Optimizing (integrated)
Process	Processes unpredictable, poorly controlled, and reactive	Process characterized for projects and often reactive	Process characterized for the organization and is proactive	Process measured and controlled	Focus on process improvement and integration
Practices and Techniques	<ul style="list-style-type: none"> Person dependent Informally and inconsistently Written (partial) 	<ul style="list-style-type: none"> Written, formatted Accessible, security, version control 	<ul style="list-style-type: none"> Specific types Attributes defined (importance, stability, release differences) 	<ul style="list-style-type: none"> Applied, integrated and measured Fully traceable 	<ul style="list-style-type: none"> Continuously improved
Tools	<ul style="list-style-type: none"> Separate documents, separate packages (i.e. Word and Excel) 	<ul style="list-style-type: none"> Consistent templates in Excel or Word May use RM tool 	<ul style="list-style-type: none"> Consistent templates in Excel or Word May use RM tool 	<ul style="list-style-type: none"> Typically uses a RM tool 	<ul style="list-style-type: none"> Automated and integrated tools
Integration	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Key projects use, others may not Some linkage to other processes 	<ul style="list-style-type: none"> All projects and functions use May be integrated with PLM 	<ul style="list-style-type: none"> Integrated with PLM 	<ul style="list-style-type: none"> Integrated with design models and DFMEA
Organization	<ul style="list-style-type: none"> Limited support Partly defined roles Little training 	<ul style="list-style-type: none"> Informal structure External training 	<ul style="list-style-type: none"> Formal structure and organization External, custom training 	<ul style="list-style-type: none"> Fully operational, managed and measured Internal training 	<ul style="list-style-type: none"> Integrated Internal, specialty training
People	<ul style="list-style-type: none"> Driven few 	<ul style="list-style-type: none"> More believers 	<ul style="list-style-type: none"> Across company May have internal experts Some cultural norms 	<ul style="list-style-type: none"> Internal experts High quality requirements culture 	<ul style="list-style-type: none"> Advanced level of proficiency Culture: DNA of Organization

PLM=Product Life Cycle Management, RM=Requirements Management, DFMEA=Design Failure Modes and Effects Analysis

HISTORY OF CAPABILITY MATURITY MODELS

Applied to Other Domains

e.g.,
Requirements Engineering



**WHY USE A
MATURITY MODEL?**

- ▶ **A Growth Roadmap**
 - ▶ **What to work on next?**
- ▶ **Can't Jump Before Walking**
 - ▶ **Get all elements to the same level of maturity**
- ▶ **A Leadership Tool**
 - ▶ **Allocation of Limited Resources: Time & Money**

BENEFITS OF A MATURITY MODEL

Ingenium Telehealth Program Maturity Model

LEVEL 6 — TRANSFORMATIVE

LEVEL 5 — STRATEGIC

LEVEL 4 — INTEGRATED

LEVEL 3 — SUPPORTED

LEVEL 2 — COORDINATED

LEVEL 1 — EMERGING

LEVEL 0 — CHAOTIC

YOU ARE HERE



Ingenium Telehealth Program Maturity Model

LEVEL 6 — TRANSFORMATIVE

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RMHS:
Dec 2021



A network diagram is constructed on a white surface using thin metal pins and a brown string. The pins are arranged in a roughly circular pattern, and the string is knotted at each pin to form a web of interconnected lines. Several of the pins are topped with small, round, colorful beads in shades of blue, green, red, and yellow. The background is a plain, light-colored surface.

THE ELEMENTS OF TELEHEALTH MATURITY



Services

1. Few Services
2. Some Services
3. Many Services
4. Lots of Services
5. Virtually All Services

SERVICES MATURITY

Specialties

1. Scattered Specialties
2. A few Specialties
3. Some Specialties
4. Broad Set of Specialities
5. Pervasive across most Specialties

SPECIALTIES MATURITY

Growth

1. Slow Growth
2. Medium Growth
3. High Growth
4. Strategic Growth

GROWTH MATURITY

Coordination

1. No Coordination
2. Some Coordination
3. Informal Coordination
4. Formal Coordination
5. Structured Coordination

COORDINATION MATURITY

Technical
Support

1. No Technical Support
2. Some Technical Support
3. Informal Technical Support
4. Formal Technical Support
5. Funded Technical Support
6. Proactive Technical Support

TECHNICAL SUPPORT MATURITY

Operational
Support

1. No Operational Support
2. Some Operational Support
3. Formal Operational Support
4. Funded Operational Support
5. Proactive Operational Support
6. Improving Operational Support

OPERATIONAL SUPPORT MATURITY

Launch
Support

1. No Launch Support
2. Some Launch Support
3. Informal Launch Support
4. Formal Launch Support
5. Structured Launch Support
6. Improving Launch Support

LAUNCH SUPPORT MATURITY

Leadership

1. Leadership is unaware
2. Leadership is aware
3. Leadership is supportive
4. Leadership is engaged
5. Leadership is driving
6. Leadership is leveraging

LEADERSHIP MATURITY

Governance

1. No Governance
2. Some Governance
3. Established Governance
4. Governance is Driving
5. Governance is Leveraging

GOVERNANCE MATURITY

Vitality

1. **Survive — Survival**
2. **Alive — Aliveness**
3. **Arrive — Success**
4. **Thrive — Fulfillment**

TELEHEALTH PROGRAM VITALITY



	0	1	2	3	4	5	6
	chaotic	emerging	coordinated	supported	integrated	strategic	transformative
Services	few	few	some	some	many	lots	virtually all
Specialties	scattered	scattered	a few	some	broad	pervasive	pervasive
Growth	slow	slow	slow	medium	high	strategic	strategic
Coordination	none	some	informal	formal	structured	structured	structured
Tech Support	none	some	informal	formal	funded	proactive	proactive
Operational Support	none	none	some	formal	funded	proactive	evolving
Launch Support	none	none	some	informal	formal	structured	evolving
Leadership	unaware	unaware	aware	supportive	engaged	driving	leveraging
Governance	none	none	none	some	established	driving	leveraging
Vitality	survive	survive	alive	alive	arrive	thrive	thrive

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LEVEL 0 — CHAOTIC



LEVEL 0 — CHAOTIC

- ▶ One or more services or pilots launched without support or endorsement (or even awareness) of leadership (“proceed until apprehended”)
- ▶ Implementation oftentimes facilitated by technology vendors.
- ▶ Typically driven by the passion of individual physicians.
- ▶ Little or no coordination with the IT department.

LEVEL 1 — EMERGING

- ▶ Someone at the organization is aware of the existing/planned telehealth services and pilots.
- ▶ Leadership is aware of ongoing telehealth pilots and services.
- ▶ Some consideration given to the financial sustainability, but not measured.
- ▶ Limited coordination with the IT department.

LEVEL 2 — COORDINATED

- ▶ Leadership endorses telehealth services but does not provide resources for support.
- ▶ Some informal communication or coordination between different telehealth services is occurring.
- ▶ Implementation is a labor-of-love effort by departmental resources.
- ▶ The IT department has a degree of involvement with most telehealth services.

LEVEL 3 — SUPPORTED

- ▶ A central telehealth support organization provides operational and technical support
- ▶ Pilots and services are planned and launching using sound project management and workflow design principles.
- ▶ Policies are in place to ensure regulatory compliance including patient privacy.
- ▶ IT is fully involved in all telehealth services from technology selection to technology support.

LEVEL 4 — INTEGRATED



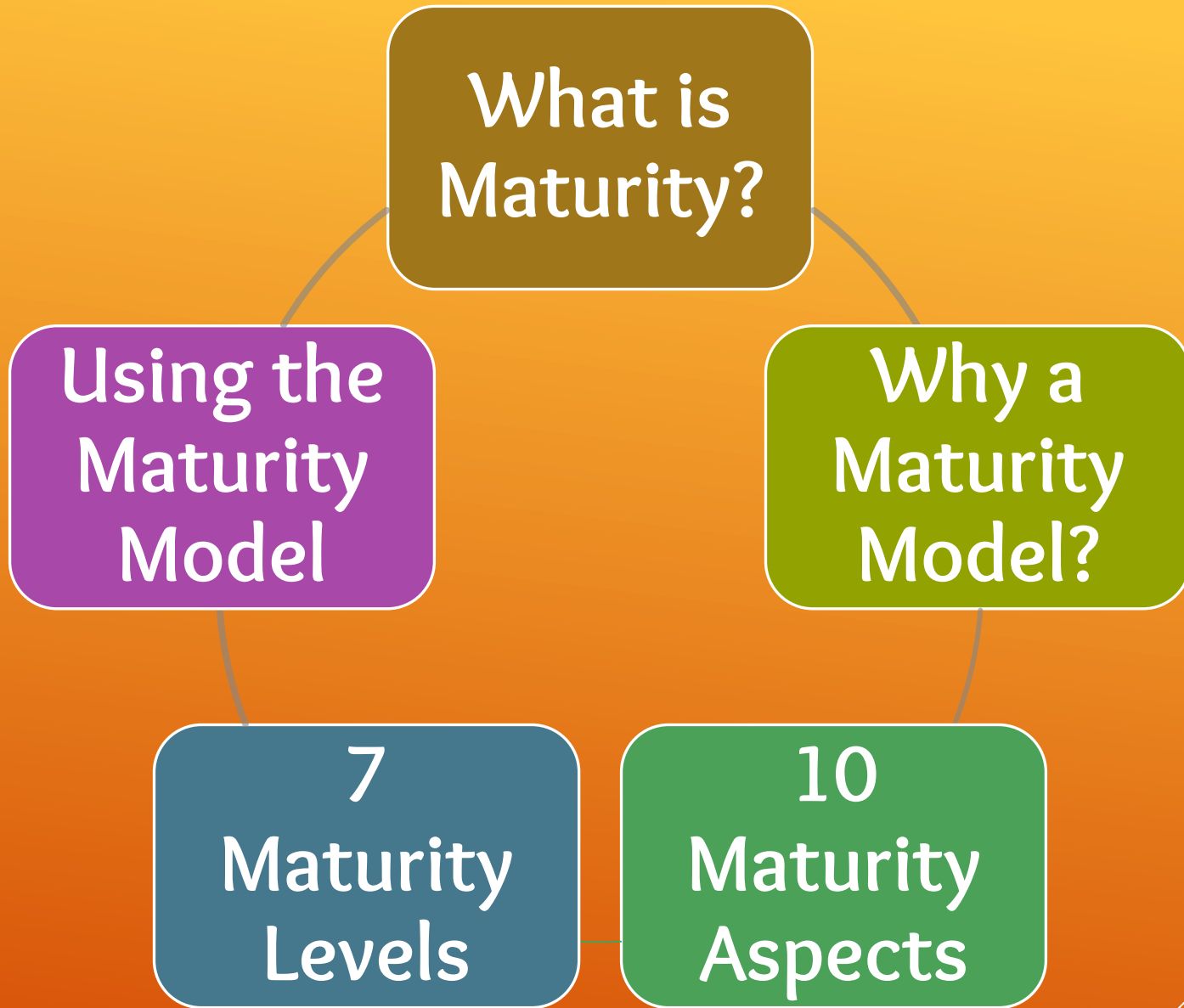
- ▶ Telehealth services are fully integrated with traditional healthcare delivery services.
- ▶ Patients can access multiple specialties remotely with a seamless user experience.
- ▶ Telehealth-generated data, including data from patient-provided wearables and apps,
 - ▶ are stored into the medical record
 - ▶ are available for analysis and to support diagnosis and treatment

LEVEL 5 — STRATEGIC

- ▶ Telehealth is seen as a strategic investment.
- ▶ New telehealth services are selected and launched based on their ability to fulfill the organization's strategic objectives.
- ▶ The executive leadership team is actively leveraging telehealth to achieve its organizational strategic objectives.
- ▶ The organization is embracing telehealth to reinvent its relationship with their patients.

LEVEL 6 — TRANSFORMATIVE

- ▶ The organization is leveraging telehealth to innovate the delivery of care, e.g., through virtual hospitals.
- ▶ The organization is developing their own telehealth solutions and services.
- ▶ The organization is constantly reviewing and improving its telehealth capabilities.
- ▶ The organization is moving towards enabling “Empowered Wellness” by delivering truly connected care.





Putting it all Together

Secure Leadership Buy-In

Assess Current Maturity

Identify Gaps In Closest Level

Close Gaps To Achieve Level

Launch Project to Reach Next Level

	0	1	2	3	4
	chaotic	emerging	coordinated	supported	integrated
Services	few	few	some	many	many
Specialties	scattered	scattered	a few	some	broad
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CONTACT

Thank
You!



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CONNECT



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